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CITY OF PERTH —

Perthshire Natural History Museum.



REPORT.
[1902-3]



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

—
1903.



CITY OF PERTH

Perthshire Natural History Museum.

REPORT

*To the Lord Provost, Magistrates, and
Town Council.*

THE Joint Committee of the Perthshire Natural History Museum has pleasure in submitting this, the first Report, covering a period of thirteen months. Previous reports on the Museum appear in the Proceedings of the Perthshire Society of Natural Science.

Perthshire Museum, or Local Collections.

Fishes.—Four more plate-glass tanks have been added, after the pattern of those described last year. These contain, preserved under natural conditions, the Perch, Stickleback, Pike, and Eel. A painted cast of a Pike has also been added.

Amphibians.—Here also three tanks have been added. These show the life-history and natural surroundings of the Frog, Toad, and Newt.

Birds.—To the bird-cases no additions of importance have been made.

Birds' Nests.—These cases have been cleaned. The Nests themselves have been overhauled and new labels attached. Two Eagle's Eggs have been added to the collection.

Mammals.—A plate-glass tank containing nest and young of a common field Vole, built in a potato-pit, has been added; also a Daubenton's Bat and an albino Rabbit.

Minerals.—These have been re-arranged in two cases along the east gallery; new labels were added, and small maps of the County affixed, to indicate in brief the locality of the specimen.

Under the east gallery rail cases, a cabinet, fitted with trays, has been built for the purpose of storage.

It is proposed to continue this cabinet right round the gallery rail as time and funds permit. The above trays are the same size as those in the east wall cabinets, so that the whole series, when complete, will be interchangeable.

Plan of Museum.—A framed plan of the ground floor of the Museum has been placed on the wall at the foot of the stair, and a plan of the first floor at the head of the stair. These show at a glance the scheme of arrangement of the two Museums.

Index or Type Museum.

Botany.—Some time ago it was felt that our series of teaching models of flowers, fruits, &c., should be extended, and an application was made to the Board of Education for aid to purchase some thirty-six. My Lords very kindly granted the handsome allowance of 50 per cent. on the actual cost.

New Case.—A central, upright case has been constructed and fixed above the centre of the first table case. This addition doubles the exhibition area of the case.

List of Donations to the Perthshire Museum.

- Springtail (*Achorutes Schottii*).—Mr. A. Gray.
 4 Insect Drawings.—Miss M. G. Dickson.
 18 Bees (*A. albicrus*).—Mr. Alex. M. Rodger.
 Bee (nest).—Mr. C. MacIntosh.
 Wood Wasp (*S. juvencus*).—Mr. John Wilson.
 Wood Wasp (*S. gigas*).—Mr. James Kippen.
 5 Gulls and Insects.—Mr. W. Wylie.
 Convolvulus Hawk-Moth.—Mr. Thomas Hunnah.
 Convolvulus Hawk-Moth (extended proboscis).—Mr. R. Lawson.
 Salmon Fry.—Mr. R. H. Lumsden.
 Salmon Parr.—Do.
 Salmon Parr.—Mr. G. Malloch.
 Salmon Smolt.—Mr. R. H. Lumsden.
 Pike (painted cast).—Mr. James Stewart.
 Weever Fish.—Mr. A. Speedie.
 4 Newts.—Mr. Alex. M. Rodger.
 Adder and Young.—Mr. B. Conacher.
 Tree Pipet, Nest and Eggs.—Mr. R. Gloag.
 Kestral Hawk, 2 eggs (abnormal).—Mr. W. White.
 2 Eagle's Eggs.—Mr. P. D. Malloch.
 Capercaillie.—H. Pullar, Esq.
 Gold-crested Wren.—Mr. A. Robertson.
 Kingfisher.—Mr. John Robertson.
 Squirrel.—Mr. Alex. Macdonald.
 Field Vole, Nest and Young.—Mr. J. S. Grant.
 Rabbit (albino).—Mr. John Macfarlane.

Daubenton's Bat.—	Miss E. Thornton.
Long-eared Bat —	Mr. John Renton.
Weasel.—	Mr. James Rodger.
Quartz Crystals.—	Rev. P. A. Gordon Clark.
Limestone.—	Mr. Alex. M. Rodger.
Mica Schist.—	Do.
Quartzite and Iron Pyrites.—	Do.
Colloid Quartz.—	Do.
Phyllites (answeichung structure).—	Do.
Rutile in Quartz.—	Do.

List of Donations to the Index Museum.

Sea Pen.—	Professor D'Arcy W. Thompson, C.B.
2 Sea Fans.—	Henry Coates, Esq.
Coral (Madrepore sp.).—	Do.
Organ-pipe Coral.—	Do.
4 Starfish.—	Do.
Horseshoe Crab.—	Do.
3 Barnacles.—	Do.
Scorpion.—	Do.
Centipede.—	Do.
Tarantula.—	Do.
Pholas.—	Do.
Spondylus.—	Do.
Chiton.—	Do.
Balloon Fish.—	Do.
Fossil Fish.—	Do.
Chameleon.—	Miss Fleming.

Spiny Squirrel.—	Col. Drummond Hay.
3 Fossil Plants from Coal Measures.—	R. Kidston, Esq.
Fossils from Oxford Clay.—	Mr. J. Anker.
Flints (palæolithic).—	Mr. W. H. Seton-Karr.
Asurite.—	Henry Coates, Esq.
Chrysocolla and Quartz.—	Do.
Malachite.—	Do.
Iron Pyrites.—	Do.
Marcasite.—	Do.
Palm Wood (petrified).—	Do.
Palm Wood (crystalized).—	Do.
Petrified Wood.—	Do.
Petrified Bone.—	Do.

During the year the buildings have been used by the Perthshire Society of Natural Science and various Educational bodies. Teachers and children have also paid frequent visits in connection with the Children's Essay Competition, as well as for Special Object Lessons. The number of Essays sent in by children competing for the Prizes offered by the President of the Perthshire Society of Natural Science was 100. The subject was "Insects of Perthshire."

Further, the number of specimens borrowed by Teachers to illustrate their Object Lessons was 145.

A number of Students read for Examinations, during recess, at our cases. Artists and Art Students have also received the loan of specimens from the

cases. A designer and painter was also supplied with material for a model.

The number of visitors was 12,790.

The Joint Committee, on a statement by the Curator, approves of the following work being gone on with during the ensuing year :—

1. Arrangement of Cœlenterata Case, at present in progress.
2. Cabinets in Gallery to be continued—one Cabinet at a time.
3. Economic Botany to be transferred from upright case No. 1 to the new case over table case No. 1.
4. Botany (Models, &c.) to be removed from south wall case to upright case No. 1.
5. Mammals to be continued round south wall case.
6. The Curator was authorised to get what insect material is required to complete the Economic Insect Collection.

THOMAS LOVE,

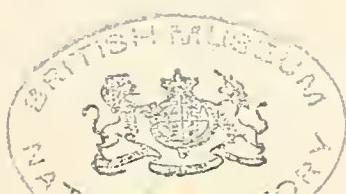
Chairman of Committee.

ALEX. M. RODGER,

Curator.

PRESENTED

25 MAY 1903



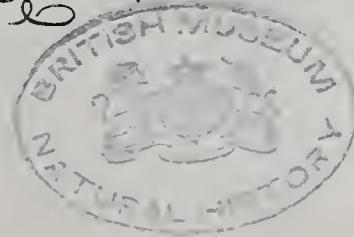
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CITY OF PERTH.

Perthshire Natural History

Museum.



REPORT, 1903-4.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1904.

MUSEUM REGULATIONS.

The Museum is open daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY, SATURDAY, 6 to 8 p.m.

ADMISSION FREE.

**Students and others desirous of consulting special Collections
should apply to the Curator.**

**The Museum is closed on Victoria Day, Midsummer Day, and
Inauguration Day.**



CITY OF PERTH.

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Perthshire Natural History Museum.

Report of the Museum Joint-Committee

TO

The Town Council,

FOR YEAR ENDING MAY 15TH, 1904.

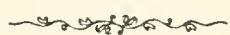


Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1904.

MUSEUM JOINT-COMMITTEE.



Members of Council.

Lord Provost LOVE, *Chairman.*

Dean of Guild MACNAB.	Councillor HAMILTON.
Councillor ALEXANDER.	„ MACKAY.
„ CRYSTAL.	„ MORRISON.
„ CUTHBERT.	„ NOAD.

Member of Perth County Council.

The Right Hon. The EARL OF MANSFIELD.

Member of Perth School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

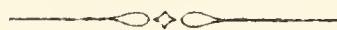
Mr. Wm. BARCLAY.	Mr. H. COATES, <i>Vice-Chairman.</i>
„ A. W. BROWN	„ S. T. ELLISON.
„ JAMES COATES.	„ JAMES MORISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

Perthshire Natural History Museum,

PERTH.



Report of the Museum Joint-Committee

for the Year ending May 15th, 1904.



To the Lord Provost, Magistrates, and Town Council.

GENTLEMEN,

The Joint-Committee of the Perthshire Natural History Museum has pleasure in submitting the Second Annual Report.

Perthshire Museum, or Local Collections.

The Geological Cabinet, under the east gallery rail, has been continued, a second cabinet having been constructed and built in, along with the necessary trays. The addition has relieved the congested condition of the local geological duplicate collections.

It was decided to complete another cabinet in the local insect collection, and eighteen more glass-topped drawers were therefore ordered. Lieut. Campbell has undertaken to transfer the next series of moths to these drawers from the cabinets in the Index Museum. This piece of work when complete will admit of the somewhat scattered index collection of Lepidoptera being brought together in their proper place.

During the last three years a considerable collection of Collumbola (a group of inconspicuous insects found on water and in moist places) has been brought together by Mr. Gray. These have been handed to Mr. G. H. Carpenter, B.Sc., of the Science and Art Museum, Dublin, to report upon.

The collections of Perthshire Lichens have been put in order in the exhibition case, and the duplicate collections are now available for reference. For this the Committee's thanks are due to Miss Thomas.

Some time ago Mr. R. H. Meldrum undertook to re-mount the collections of Perthshire mosses. He reports to me as follows:—“The mounting of the mosses in the Museum Herbarium has been continued during the past year, and the only specimens now remaining unmounted are a few recently collected by Mr. M'Intosh of Inver and myself. These will be mounted as soon as time permits.”

The Fungi collections continue to grow, further donations having been received from Mr. M'Intosh, Mr. Menzies, and Miss Miles.

At the end of each week during the months of June and July, a small collection of named wild flowers of the district was on exhibition in the Lecture Room. Post cards having been issued to the Schools in the City and neighbourhood, many children, and a number of classes along with their teachers made use of the collections. Miss Thomas took an active part in this work. We are to repeat the experiment again this year.

The Index, or Type Museum.

In December, 1902, a considerable collection of Cœlenterata—anemones, jelly-fish, corals, &c.—were purchased from the Naples marine station, many of them of great beauty and most delicate structure. These, along with additions made to the group from time to time, have been classified and arranged in their proper cases, *Index Museum, Case No. 3-4*. On the base of No. 4 a large rectangular glass tank 3 feet by 9 inches deep has been arranged to illustrate a few characteristic corals, anemones, sea-pens, &c., in natural surroundings. The labeling of these cases has yet to be done.

A very handsome donation was received from the Trustees of the British Museum (Natural History), consisting of over 800 specimens of insects from the duplicate collections of the Natural History Department. The collection includes—291 Lepidoptera (butterflies and moths); 361 Coleoptera (beetles); 81 Hemiptera (bugs); 36 Diptera (flies); and 33 Orthoptera (grasshoppers, &c.)

Application was again made to the Board of Education for aid to purchase material to illustrate a case on Economic Entomology— insects injurious or useful in agriculture and forestry. My Lords approved of the scheme and of the list submitted by the Curator, and agreed to grant 50 per cent. towards the nett cost. This very beautiful material is now to hand, and consists of over 90 species of

insects in various stages, with specimens of injuries committed by these insects in their various stages.

Mr. Barclay still continues the work of re-arranging the European collections of dried plants.

Many other donations have been made to the Museum, as detailed in the list of donations.

During the year a number of teachers have taken advantage of the facilities to give special lessons on the premises to classes of children. 207 specimens also have been borrowed for school work in Nature knowledge and drawing, while the Science Department of the Academy has conducted numerous classes and had the use of the cases and duplicate material.

Several University student have read at the cases during the year ; and a number of birds, fishes, &c., have been borrowed by art students, and also by designers for models.

The exhibition cases were twice inspected during the year for measurements, &c., and specimens of the fittings given to contractors who have instructions to use our pattern for a model.

The exhibition fish tanks employed in our Museum were described by the Curator to the Museum's Association at their meeting in Aberdeen, and very favourably commented upon. The paper appears in the Association Journal.

A number of special visits have been made to the Museum during the year in connection with the Perthshire Society of Natural Science and its work, viz. :--

- The Dunfermline Naturalists' Society, on 9th May, 1903.
- The Edinburgh Natural History Society, on 21st May, 1903.
- The Photographic Convention of the United Kingdom, from 4th to 11th July, 1903.
- The Cryptogamic Society of Scotland, on 29th September, 1903.

The children's essay competition for the last year on "The Part which Water has played in the breaking down and building up of the Rocks of Perthshire" was a popular one, no less than 163 essays being sent in. This year the subject is "The Fishes of the Lochs and Streams of Perthshire." Duplicate material is now to hand for those schools desirous of borrowing material.

In connection with the essay competition scheme, there has been inaugurated a Junior Section in connection with the Society.

The number of Visitors to the Museum was 16,110.

ADDITIONS TO THE MUSEUM.

MAMMALS—

Rabbit Skull (malformed teeth)—Miss S. Kettles.
 Squirrel's Nest—Mr. A. Macdonald, Pitlochry.
 Long-eared Bat—Mr. R. Lawson.
 Armadillo—Rev. J. W. Hamilton, Dunkeld.
 Long-eared Bat—Mr. C. L. Wood, of Freeland.

BIRDS—

Gold Crested Wren—Mr. W. White.
 Willow Wren—Mr. F. Hart.
 Blackcap—
 Chaffinch—
 Teal—Purchased.
 Grouse (Barred Type)—Captain E. H. C. Bald.
 Whitefronted Goose—Mr. D. R. Maitland, Dundee.
 Greenshank—Mr. J. H. Middleton, Baldarroch.
 Yellowhammer—Mr. A. Macdonald, Pitlochry.
 Glossy Ibis—Purchased.
 Kingfisher—
 Roller—on loan—Mr. F. G. Steuart, Ballinluig.
 Little Grebe—three young—Mr. F. Hart.
 Spotted Craik—Mr. W. H. Cox, of Snaigow.
 Scaup Duck—Mr. W. B. Fairweather.
 Lyre bird—tail feathers—Miss Dow.
 24 Birds from New Zealand—Mr. Lewis Bilton, W.S.

Eggs—

Little Auk—	Mr. J. Stewart.
Sclavonian Grebe—	,
Bee-eater—	,
Swift—	,
Gyr Falcon—	,
Manx Shearwater—	,
Hobby—	,
Chough—	,
Stormy Petrel—	,
Sparrow Hawk—nest and eggs—	Mr. A. Coats, Battleby.
Bullfinch—	Mr. J. Bruce.
Sea-birds' Eggs, Fair Isle, 30 Specimens—	Mr. Jas. Coats, Jun., Paisley.

AMPHIBIANS—

Newts, 3 Specimens—Mr. A. Rae.

FISH—

Perch, $3\frac{1}{2}$ lbs. weight—Mr. James Brown.

Salmon Fry—Mr. R. Lumsden.

Short-spined Cottus—Mr. Hoolachan.

Sawfish Saw—Mr. M. Thoms.

Red Mullet—Mr. A. Speedie.

INVERTEBRATES—

Lepidoptera, 33 Perthshire—Mr. R. Lawson.

Convolvulus Hawk Moth—Mr. W. Fenton.

Death's-head Moth—Mr. James Bell.

Mrs. Hackstoun.

„ Lepidoptera, 28 Perthshire—Mr. W. Wylie.

Land Shells (a number from Dolomite Mountains)—Mr. James Coates.

Hermit Crabs and Marine Shells, Stornoway—Mr. H. Coates.

Lepidoptera, 17 British—Mr. R. Lawson.

Black Scorpion— „

Insects, 808 Duplicate Specimens—Trustees, British Museum.

Insects, 14 Orthoptera, 307 Hemiptera, 6 Coleoptera—Mrs. F. B. White.

Land and Freshwater Shells (a number of)—Mrs. F. B. White.

Microscope Slides (5 boxes)—Miss Gillespie.

Cryptochiton—Prof. D'Arcy W. Thompson, C.B., Dundee.

GEOLOGY—

Granite (various localities)—Mr. C. M'Intosh, Inver.

Rock Specimens, 5—Mr. G. H. Gostwyck.

Dolorite—Mr. A. M. Rodger.

Rock Specimens, 3 (Moncreiffe Tunnel)—Mr. T. Thomas.

Clay Slate—Mr. A. Gray.

Quartz and Mica Crystals—Mr. A. Gray.

Glenfarg Quarry, Photograph—Mr. Andrew Stenhouse.

Granite, 16 Specimens, various localities (polished)—Mr. J. L. Thomson.

Granite, 6 Specimens (polished)—Mr. John Taylor.

Quartz, Crystal—Mr. James Robertson.

Alabaster, cut and polished—Mr. D. Beveridge.

Concretionary Nodules (a number)—Miss Gillespie.

Conglomerate, from artesian boring, 95 ft. deep—O. R. S., Crieff
—Mr. Watt, Crieff.

Sandstone, from the same, 100 ft. deep—Mr. Watt.

GEOLOGY—*continued.*

- Garnets and Garnetiferous Mica Schist—Mr. Thomas M'Glashan, M.A., Killiecrankie.
 Minerals, 3 Specimens—Mr. William Kerr, M.A., Crieff.
 Lead Ore—Rev. P. A. Gordon Clark, M.A.
 Copper Pyrites—
 Lead and Zinc Ores (Isle of Man)—Mr. A. M. Rodger.
 Carnelian (cut)—Mr. H. Coates.
 Corals, Fossil, from Carboniferous (a number of)—Mr. P. MacNair, Glasgow.
 Plants (a number of)—Mr. P. Jack, Shettleston.
 Ammonite (Buckhaven)—Mr. W. T. Robertson.
 Fish, Fossil, from O.R.S., Orkney (a number)—Mr. J. W. Cursitor, Kirkwall.

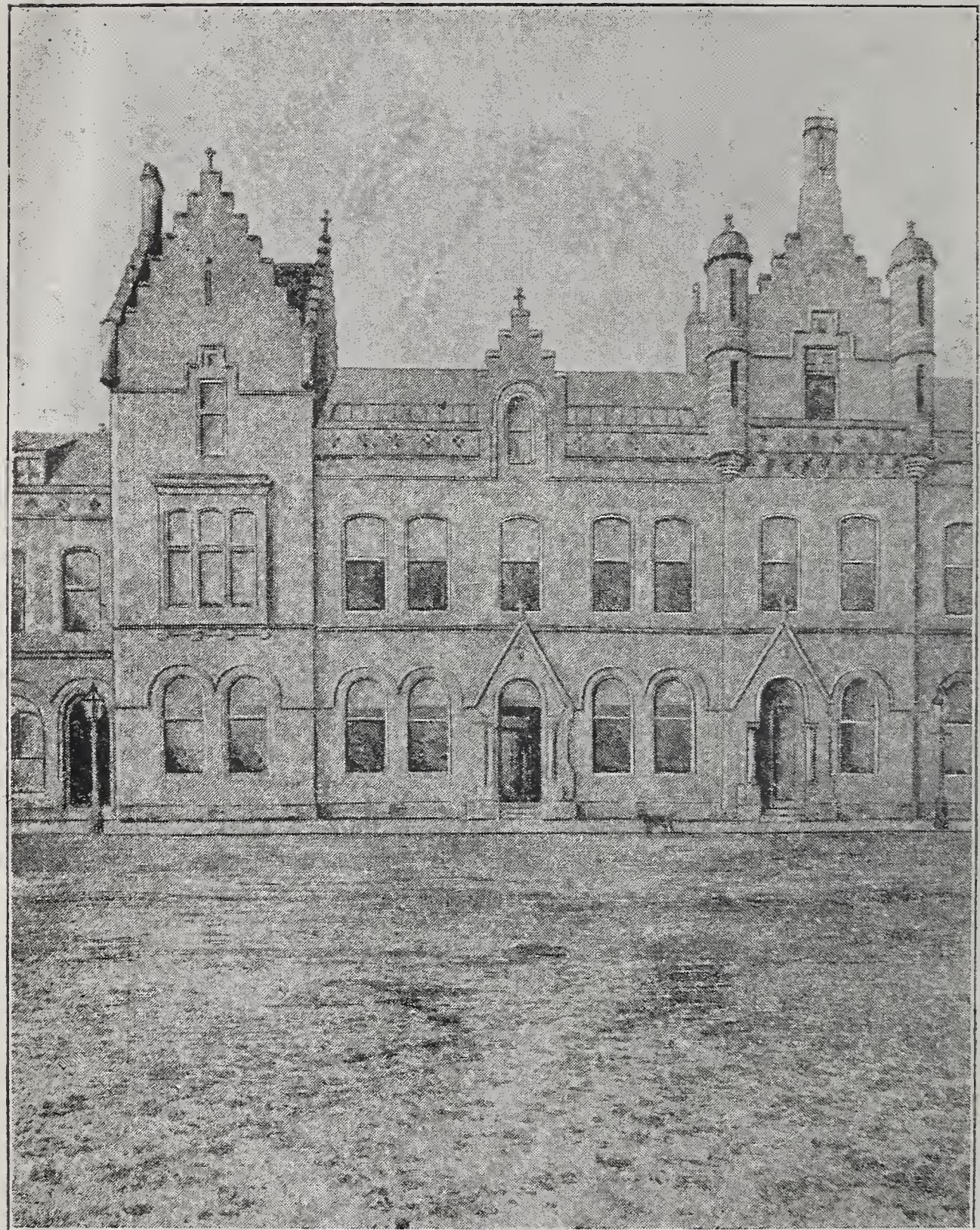
THOMAS LOVE,

Chairman of Committee.

ALEX. M. RODGER,

Curator.
P. Rodger.

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PERTHSHIRE NATURAL HISTORY MUSEUM.

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CITY OF PERTH.

Perthshire Natural History Museum.



REPORT, 1904-05.



Perth:

PRINTED BY D. LESLIE 20 ST JOHN STREET.

1905.

MUSEUM REGULATIONS.

The Museum is open daily --

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY, and SATURDAY, 6 to 8 p.m.

ADMISSION FREE.



CITY OF PERTH.

Perthshire Natural History
Museum.

Report of the Museum Joint-Committee

TO

The Town Council,

FOR YEAR ENDING MAY 15TH, 1905.

— * —

Perth:

PRINTED BY D. LESLIE 20 ST JOHN STREET.

—
1905.

MUSEUM JOINT-COMMITTEE.

—*—

Members of Council.

Lord Provost LOVE, *Chairman.*

Bailie MACKAY.

Councillor CRYSTAL.

„ CUTHBERT.

„ HAMILTON.

Councillor JARVIE.

„ MORRISON.

„ MACNAB.

„ NOAD.

Member of Perth County Council.

The Right Hon. The EARL OF MANSFIELD, P.C.

Member of Perth School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

Mr. Wm. BARCLAY.

„ A. W. BROWN.

„ JAMES COATES.

Mr. H. COATES, *Vice-Chairman.*

„ S. T. ELLISON.

„ JAMES MORISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

JOHN YOUNG, *Janitor.*

Perthshire Natural History Museum.

P E R T H.

Report of the Museum Joint-Committee

for the Year ending May 15th, 1905.

To the Lord Provost, Magistrates, and Town Council.

GENTLEMEN,

The Joint-Committee of the Perthshire Natural History Museum have pleasure in submitting their Third Annual Report.

The Museum building throughout is in good repair. Improvements in regard to several details of the fittings are at present being proceeded with.

The table-cases round the gallery rail having been found to admit dust between the glass and their frames, it was decided to have the bearings supporting the glass removed and to insert baize. It is probable that, as the wood becomes more fully seasoned, other cases will have to be dealt with in the same way.

Spring-roller blinds are being fitted into the windows above the gallery, in order to modify the light.

An Illustrated Handbook to the Museum has been prepared by the Curator, and is now on sale in the Museum as well as the Booksellers' shops in the city. It contains 75 pages of descriptive matter and 14 illustrations. By introducing advertisements, your Committee were enabled to offer to the public for 3d. a book which cost 6d. to print. Besides being a Guide to the Museum, the Handbook forms a useful epitome of the Natural History of the County.

Last year there were 13 weekly exhibits in the Lecture-room of named wild flowers of the district, at which 306 specimens were shown. This year the exhibition is to be continued from May to

August. This will enable children preparing for the Essay Competition to make use of the exhibits in naming their specimens, besides being a help to teachers and others interested in Plant Life. Post cards have been sent to the schools in the city and county informing them of the above facilities. The Committee is again indebted to Miss Thomas and others for their services in this good work.

The subject of the children's Essay Competition for this year is "Half-a-dozen Wayside Flowers."

Last year 315 boys and girls belonging to schools in Perth and Perthshire sent in essays on "The Fishes of the Lochs and Streams of Perthshire."

The number of specimens borrowed for school teaching purposes this year was 123. 31 classes visited the Museum along with their teachers, including the local Elementary Schools, the Academy, Students of University College, Dundee, and the University Extension Classes, Edinburgh.

Apart from members of the Perthshire Society of Natural Science, 39 applications were made for assistance and advice in various departments of Natural History, such as the naming of specimens, enquiries as to gardener's pests, &c.

The number of meetings held in the buildings was 107, including a very successful course of 10 Lectures on Forestry, by Dr. Borthwick, of the Royal Botanic Gardens, Edinburgh, to a class of 62 foresters and land agents, &c.

A list of the donations to the Museum during the past year is appended. A detailed account of the work done in the different Departments, and additions to the Museum, will be found under their respective headings.

The number of visitors to the Museum for the year ending May 15th, was 16,709.

The Perthshire or Local Museum.

There has been no addition to the mammal collection during the year, except a model of a Moles' fortress. This model illustrates the underground habits of the male mole, and is a useful adjunct, illustrating the life-history of these interesting animals.

A number of common birds and a few rarer species have been added to the bird cases, as will be seen from a glance at the list of donations to the Museum. All, whether common or rare, were most acceptable, and a number of common perching birds are still much desired.

A number of very useful additions have been made to the collection of Fishes, but nothing of outstanding importance has been added to the exhibition cases.

In the gallery a number of additions were made to the Insect collections, chiefly of Flies and Moths. The work of transferring and re-arranging the reference collections of Local Butterflies and Moths (*Lepidoptera*), undertaken by Lieut. Campbell two years ago, is now completed. Our thanks are due to Mr. Campbell for this work.

Mr. Meldrum reports as follows on the collection of Mosses :—

“A number of specimens of Mosses have been added to the Herbarium during the year, and are at present being mounted. Specimens have been contributed by Messrs. M'Intosh and Menzies, and by myself.”

Mr. Barclay reports as follows on the collection of Flowering Plants in the Herbarium :—

PERTHSHIRE HERBARIUM.—“The arrangement of this collection is now pretty complete, and the flora of the various districts of the County is very fully represented. The additions for the past year or two have mostly consisted of introduced plants which have occurred here and there, such as *Juncus tenuis* Willd. and *Matricaria discoidea* Lin. It will be interesting to note how many of them maintain their ground.”

EUROPEAN HERBARIUM.—“The re-arrangement of this collection is not yet finished, but is well forward. Some additions have been made, notably a small collection of Norwegian plants presented by Mr. James Coates.”

The Index, or Type Museum.

The chief addition to this Museum is a series of eight cases illustrating the life-history of Economic Insects. The series embraces over 90 species, which are either injurious to the work of Farmers or Foresters, or useful in the economy of nature. A large label placed beside each species sets forth the life-history and remedies or methods of prevention, as far as known. It may be remembered that the Board of Education last year gave a grant of 50 per cent. towards the purchase of material for this collection.

The Committee is again indebted to the Board of Education for the promise of 50 per cent. towards the purchase of a Giraffe and Polar Bear. Besides these, other important additions to this

Museum are an Arctic Wolf, Tree Porcupine--the latter from Mr. Bostock of the Scottish Zoo., Glasgow—and the important exchange made with the Museum of Perth, West Australia, thereby adding a number of animals to our collection peculiar to the Australian region.

A set of models of Precious Gems form a very useful addition to the mineral oollection. To the Geological collection were presented by Mrs. Barr the specimens brought together by the late Mr. T. Barr, of the Caledonian Railway, consisting of 141 fossils and 72 minerals. Some of the specimens are very fine, and will be a useful addition to the Index reference series.

The Committee is indebted to Mr. Robert Kidston, F.R.S., who very kindly named our series of carboniferous plant fossils.

ADDITIONS TO THE MUSEUM.

MAMMALS—

Molar Tooth, African Elephant : Purchased.

Moles' Fortress : „

Indian Mongoose : Lord Mansfield.

Part of lower jaw of horse dug out of foundation in King Edward Street : Mr. A. Fraser.

Walrus Skull : Mr. J. K. M'Lean.

Banded Anteater, male, female : The Director, Perth Museum, W. Australia.

Long snouted Phalanger, male, female : „ „ „

Arctic Wolf : Purchased.

Brazilian Tree Porcupine, female : Mr. Bostock, Scottish Zoo.

Rabbit Skull, teeth showing permanent roots : Mr. A. M. Rodger.

Black Rat : Mr. J. M. B. Taylor.

Black-gloved Wallaby : The Director, Museum, Perth, W. A.

Native Cat : „ „ „ „

BIRDS—

Lapwing, young male : Mr. James Dow.

Emu, feet and bill : Mr. D. M. Mackay.

Tawny Owl, adult male : Mrs. John Wilson.

Chiff-chaff, female : Mr. T. M'Clure.

Sparrow-Hawk, male : Mr. A. Speedie.

Sparrow-Hawk, 5 young and nest : Mr. A. Speedie.

Black-headed Gull, adult male : Mr. J. M. Wilson.

BIRDS—*continued*—

- Roller, African : Mr. W. M. Edwards.
 Robin, adult male : Mr. A. Folkarde.
 Woodcock, adult female : Mr. James Pringle.
 Water-Rail, female : Mr. A. Dunn.
 ,, ,, : Mr. P. Dow.
 Goldfinch, adult male : Mr. James Maxwell.
 Tawny Frogmouth : Director, Museum, Perth, West Australia.
 Laughing Jackass : ,, ,, ,, "
 Goldfinch, female : Mr. Alex. Robertson.
 Brambling, male : Mr. T. M'Glashan.
 Greenfinch, male : Mr. A. M. Rodger.
 Wren, female : Mr. A. Folkarde.
 Great-crested Grebe, used nest : Mr. W. H. Cox.
 Penguin egg, *P. adeliae* : Mr. H. Coates.

REPTILES—

- Moloch Lizard : The Director, Museum, Perth, West Australia.
 Stump-tailed Lizard : ,, ,, ,, "
 Crocodile, Alligator, and Turtle eggs : Purchased.

FISHES—

- 2 Sea-Trout Smolt : Mr. P. D. Malloch.
 Sand eels (a number) : ,, ,,
 Green-bone, *Belone vulgaris* : Mr. Coull.
 3 River Lamprey, *P. branchialis* : Mr. G. Malloch.
 2 Trout Parr : Mr. P. D. Malloch.
 4 Sea-Trout Smolt : ,, ,,
 3 Salmon Parr : ,, ,,
 3 ,, Smolt : ,, ,,

INVERTEBRATES—

- 5 Slugs, *T. halliotide* : Mr. W. H. Edwards.
 Guinea-worm : Dr. J. Lyell.
 Convolvulus Hawk-Moth : Mrs. Drummond Forbes.
 ,, ,, : Mr. T. M'Glashan.
 2 Lac. Insects : Dr. Scharff.
 Moth, *Dasypolia templi*, male : Mr. Allan Menzies.
 Moths, 10 Perthshire species (life-history) : Mr. Wm. Wylie.
 ,, 2 British ,, (,,) : ,,
 Flies, 54 specimens, Perthshire : ,,
 Scorpion flies, 4 ; Gall flies and Galls, 5 : ,,
 Longicorn Beetle (Cuba) : Miss King.
 Tsetse Fly and Indian Mosquitoes : British Museum.
 Case of live Meadow Ants : Mr. James Coates.
 2 Cameos on Helmet Shells : Purchased.
 Octopus (Vancouver) : Mr. R. Cruickshank.
 Sawfly and pupa case : Mr. Geo. C. Young.

PLANTS—

Norwegian Plants : Mr. James Coates.

Ferns and Lycopods (New Zealand) : Mrs. Todhunter.

Fortingall Yew, 3 photos : Mr. John Grant.

GEOLOGY—

141 Fossils, New Zealand ; Lias, Yorkshire ; Carboniferous, Scotland : Mrs. T. Barr.

72 Minerals, various localities : Mrs. T. Barr.

Opal, a number of specimens, Queensland : Mr. Robert Macdonald.

Turquoise, N. India : Mrs. Wann.

Blue diamond ground, Krugersdorp, South Africa : Mr. W. Edwards.

Gold Quartz : Mr. W. M. Edwards.

13 Minerals, various : „

Nitrate of Soda, showing commercial grades : Mr. P. R. Harper.

4 Ammonites, Lower Oolite, Cromarty : Mr. James Robertson.

Gold Quartz, South Africa : Mrs. Hood.

Geode : Mr. J. M. B. Taylor.

Amethystine Quartz : Col. A. W. H. Hay-Drummond.

Stone Implements, Fayoom, Egypt : Mr. H. W. Seton-Karr.

Stone Socket : Mr. R. R. B. Watson.

Crusie : Mrs. M'Callum.

Flint Arrowhead (Perthshire) : Mrs. Scott.

THOMAS LOVE,

Chairman of Committee.

ALEX. M. RODGER,

Curator.

PRESENTED

1 AUG. 1905



TAY STREET, PERTH.



MUSEUM.

COUNTY BUILDINGS.

VICTORIA BRIDGE.



CITY OF PERTH.

Perthshire Natural History
Museum.



REPORT, 1905-06.

Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1906.

MUSEUM REGULATIONS.

The Museum is open daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY, and SATURDAY, 6 to 8 p.m.

ADMISSION FREE.



CITY OF PERTH.

Perthshire Natural History
Museum.

Report of the Museum Joint Committee

TO

The Town Council,

FOR YEAR ENDING MAY 15TH, 1906.

Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1906.

MUSEUM JOINT COMMITTEE.



Members of Council.

Lord Provost CUTHBERT, *Chairman.*

Bailie MACKAY.	Councillor HAMILTON.
Councillor CALDERWOOD.	„ JARVIE.
„ CROMBIE.	„ MACNAB.
„ CRYSTAL.	„ SCOTT.

Member of Perth County Council.

The Right Hon. The EARL OF MANSFIELD.

Member of Perth School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

Mr. Wm. BARCLAY.	Mr. J. COATES.
„ A. W. BROWN.	„ S. T. ELLISON.
„ H. COATES, <i>Vice-Chairman.</i>	„ JAMES MORISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

JOHN YOUNG, *Janitor.*

Perthshire Natural History Museum, **PERTH.**

*Report of the Museum Joint Committee
for the Year ending May 15th, 1906.*

To the Lord Provost, Magistrates, and Town Council.

GENTLEMEN,

The Joint-Committee of the Perthshire Natural History Museum has pleasure in submitting the Fourth Annual Report.

The Museum buildings throughout are in good repair. Several improvements in the fabric have been made since the last report. The introduction of four large incandescent burners, and the fitting of by-passes to the other burners, yield a better distribution of the light in the ground floor of the local Museum, with less consumption of gas.

The parquet flooring throughout the Museum was prepared and re-waxed. The Perthshire Society of Natural Science, with the sanction of the Museum Committee, undertook to replace the roller blinds in the windows of the ground floor facing Tay Street, and to add black blinds and fittings in those of the Lecture Room. This latter improvement admits of the Lecture Room being darkened in the day time for lantern work.

A movable grating was placed in the floor of the Index Museum, thereby improving the ventilation of the Lecture Room.

The cases throughout the Museum have had prominent numbers placed in them, making the arrangement more intelligible to visitors using the Guide Book for the first time.

The first edition of the Handbook to the Museum, published on the 15th of May last, met with an appreciative reception in the local press, the Science Journals also giving very favourable notices of it. The edition is almost exhausted, necessitating a re-issue in the immediate future, indicating clearly that such was required.

During each week from May to August, an exhibit of named wild flowers was on view in the Lecture Room, enabling the young people

preparing for the Essay Competition on wild flowers to identify the plants of the district. Altogether 320 specimens were shown, and the Committee is again indebted to Miss Thomas and others for this important work.

The number of boys and girls from the City and County Schools who competed for the prizes offered by the President of the Perthshire Society of Natural Science was 189, 76 being from the County and 113 from the City.

The Ninth Annual Essay Competition open to boys and girls attending any school in the City or County this year is on "Land and Freshwater Shells of Perthshire and their Inhabitants." Nearly 4000 circulars, setting forth the conditions of the Competition, have been issued to the Schools. Living examples of several Perthshire forms of this interesting group have been placed in the Lecture Room with the view to help those interested. In season, salmon fry, frog spawn, and other living animals were on view.

A second course of ten Lectures on Forestry, under the auspices of the Edinburgh and East of Scotland Agricultural College and the County Council of Perth, was given in the Museum Lecture Room by Dr. A. Borthwick, of the Royal Botanic Gardens, Edinburgh. The course was well attended, fully 60 students interested in trees having enrolled. It is proposed to give a series on Agriculture in the coming winter.

Several University students were granted special facilities in the Museum, enabling them to study local material.

The number of natural history specimens borrowed from the Museum for teaching purposes was 219, as against 123 last year; and the number of applications for information in pure and applied natural history was 76, as against 39 last year.

On three occasions your Committee granted the use of the Museum in connection with Conversazioni held in the adjoining rooms.

For the year ending May 15th, 1906, the number of Visitors to the Museum was 16,713, making a total of 176,462 since the opening.

The Perthshire or Local Museum.

The specimens acquired and placed in this Museum during the past year will be found recorded in the list of additions at the end of the Report.

A number of interesting Photographs and Drawings have been added to the Mammal collections, characteristic attitudes being illustrated in this way. Some of the specimen plates of J. G. Millais'

new work on the Mammals of Great Britain were utilised for this purpose.

Among birds, the most important addition is a Ruff, presented by Arthur Moon, Esq. The other birds in the list were desirable either as specimens illustrating difference in sexual plumage, or to show seasonal differences. A number of common species of perching birds were also accepted, with the view of gradually eliminating poor or faded specimens.

The descriptive labels throughout the bird collections have been varnished, as a preventative against dust and fading. Photographs from life, illustrating birds in their natural habitat, nesting, rearing young, flight, etc., have been framed and placed alongside the mounted specimens, adding further interest to these exhibits. These illustrations were presented by Mr. Charles Kirk, Glasgow.

In the Fish cases, fifteen new preparations have been added, including a very handsome Allis Shad, taken from the Tay at the North Inch Fishing Station. All of these have been mounted in long rectangular glass jars, in a solution of formalin and glycerine. In each, the fishes are placed in life-like attitudes, which are further enhanced by the addition of pebbles placed on the bottom of the jars.

In the gallery, a fourth store cabinet has been placed under gallery rail cases, and the corner has been rounded off, giving continuity to the series: Mr. R. J. D. Graham, M.A., B.Sc., has devoted many hours to the contents of these Geological Store Cabinets, arranging and labelling the duplicate and reference specimens. The Committee is much indebted to Mr. Graham for this valuable work. The series, when completed, will embrace the whole of the reference geological material, arranged in proper sequence, the local rocks, as they occur, being kept apart in separate trays.

On the Flowering Plants in the Herbarium Mr. Barclay reports :

"To the Herbarium have been added a number of plants from localities not previously represented, as well as several casuals from the neighbourhood of Perth. A specimen of *Caltha radicans* from the shore of Methven Loch was received from Mr. Druce of Cambridge, the discoverer."

The garnets (grossularite) from Corsiehill, the large garnets from Killiecrankie, and the curious crystalline form of Iron pyrites imbedded in clay slate from Birnam, are interesting additions to the mineral exhibition case.

In the collection of Perthshire Mollusca, the mounted specimen of a Tay Pearl Mussel, *Anadon margaritifer*, showing a number of pearls imbedded in the mantle, is a valuable addition to the series, and serves to remind visitors of the occurrence of this animal, which formerly represented an important industry in the district.

The Index or Type Museum.

The most important alteration in this department was the reconstruction of the table case 39-54, in which is arranged the economic series of Insects and Fungi. This necessitated the temporary removal of the exhibited and the stored material from these cabinets. The increased width, the lowering of the table case from 4 feet to 3 feet 6 inches, and the lowering of the centre case, so as to rest on the mid-rail of the table case, bring the whole of the exhibits to a more convenient height—an improvement which, in time, will be extended to the other table cases.

The cases along the south wall, 55-62, containing the models of plants, have been re-arranged; while the false back on the lower half of the case was removed, and glass shelves fitted in. This became necessary on the addition of 24 new models. There are now 144 models, representing 83 species of plants. Descriptive labels are wanted to give value to this beautiful series. The Committee offers its best thanks to the Lords of the Education Department for aid in the purchase of the last series, relieving them of half the cost.

A temporary exhibit has been placed in the window case, consisting of a series of British Marine Animals (mostly invertebrates), from the Millport Marine Station, presented by James Coats, Jun., Esq., Paisley.

Other additions to the index collections are both numerous and valuable. Towards the cost of procuring the Giraffe, Polar Bear, Porcupine and Sea Leopard, grants were received from the Education Department. The Committee fully appreciate this tangible proof of the Department's interest in the Museum.

The fine collection of African rocks and minerals received from Messrs. J. M. Calderwood, M.E., and C. W. Masterson, C.E., collected by them in the region of the Pretoria Goldfields, is on exhibition in case No. 87. Many of the specimens are particularly good, the series of Banket gold-bearing rocks taken from various levels in the Whitwatersrand reefs being most instructive, as well as the crushed minerals in the process of gold extraction. It is most gratifying to find Perth men abroad remembering the institutions of their native city.

A most excellent cast of the fossil reptile *Ichthyosaurus multiscutatus* has been acquired for the Museum. The example is framed and glazed, and will shortly be placed over the reptile case.

JAMES CUTHBERT,

Chairman of Committee.

ALEX. M. RODGER,

Curator.

ADDITIONS TO THE MUSEUM.

**Additions to the Perthshire Collections.*

MAMMALS—

- *Weasel (summer) : Mr. W. L. Simpson.
- *Deer (photographs) : Mr. A. M. Rodger.
- Porcupine : Mr. C. Kirk.
- Bonnet Monkey (head) : Mr. C. Kirk.
- Stoat (winter) : Captain W. Milne.
- Klipspringer (Horn's, S. Africa) : Com. W. M. Edwards.
- Reb Buck (head) : „ „ „
- Walrus, female and young. Purchased.

Antarctic Seals—

- Stenorhynchus leptonyx* : Scottish National Antarctic Expedition.
- Leptonychotes weddellii*, female : „ „ „
- „ „ young : „ „ „
- Lobodon carcinophaga* : „ „ „

BIRDS—

- *Hedge Sparrow (nest, 4 eggs) : Mr. D. Ferrier.
- *Chaffinch (nest composed of cotton) : Mr. A. Folkarde.
- *Swift (male) : Mr. R. M. Scott.
- *Greenfinch (4 very pale eggs) : Mr. Robert Keay.
- * „ (nest, 2 eggs) : Mr. T. M'Glashan.
- *Ruff, male : Mr. Arthur Moon.
- *Water-rail egg : Mr. Ian M'Ewan.
- *Snow Bunting, male : Mr. T. M'Clure.
 female : „
- *Stonechat, male : „
- *Ringed plover, male : Mr. John Reid.
- *Chaffinch, male : Mr. A. Gray.
- *Capercaillie, male : The Misses MacDougall.
 female : „ „
- Gannets (photo) : Mr. A. M. Rodger.
- Brown Crane : Captain W. Milne.
- Ptarmigan (8 eggs) : Captain W. Adams.
- Turnstone (1 egg) : „
- Snowy Owl (1 egg) : „
- Snow Bunting (3 eggs) : „

FISH—

- *3 Minnows : Mr. W. Malloch.
- *6 Salmon Parr : „
- *Salmon Ova : Mr. A. H. Lumsden.
- Coffer Fish : Captain Stewart.
- *Allis Shad : Purchased.

INVERTEBRATES—

- *Mussel (showing pearls) : Purchased.
- * " (shell showing grooves) : Mr. John Cook.
- Marine, 12, Shore, Carnoustie : Mr. A. M. Rodger.
- Insects, 3041 : Family of late Mr. John Stewart.
- Lepidoptera, 2844.
- Coleoptera, 172.
- Hemiptera, 3.
- Orthoptera, 16.
- Hymenoptera, 6.
- Mygale : Mrs. B. Sprunt.
- Giant Wood Wasp : Mr. H. Reekie.
- Crickets, 5 sp. : Mr. W. L. Simpson.
- *Lepidoptera, 11 species : Mr. W. Wylie.
- *Coleoptera, 1 " "
- *Hemiptera 2 " "
- Moth (cocoon in thorns), South Africa : Com. W. M. Edwards.
- Cockroach, Canary Island : Mr. J. Douthie.

GEOLOGY—

- 3 Fossils, chalk measures : Rev. F. Smith.
- Volcanic Dust : Miss E. Smith.
- Conglomerate (polished) : Mr. W. Nicoll.
- *Granite Veins in Schist : Mr. G. F. Bates.
- *Limestone : "
- *Marble : "
 - Labradorite, Hebron, Labradore : Miss Howie.
- *Iron Pyrites, 2 cubes : Mr. Harris.
- * " in slate : "
 - Iceland Spar : Mr. A. W. Aitken.
- Iron Pyrites : "
- Iron Ore : "
- 4 Minerals—agates : Mr. A. M. Rodger.
- Ores of Tin, Iron, Copper, Lead, Wash from Diamond Mines : Com. W. M. Edwards.
- 50 Minerals, Transvaal : Messrs. J. M. Calderwood and C. W. Masterson.
- Materials used in Manufacture of Porcelain : The Royal Porcelain Works, Worcester.
- Drusy (half), Cairngorms : Mr. J. M. Edwards.
- Agates (number of), Vaal River : Mr. Donald Stewart.
- *Garnets (Corsiehill) : Mr. A. G. Ogilvie.

BOTANY—

- 24 Brendel's Plant Models : Purchased.

TAY STREET, PERTH.



MUSEUM

COUNTY BUILDINGS

VICTORIA BRIDGE



CITY OF PERTH.

Perthshire Natural History
Museum.

REPORT, 1906-07.



Perth:

PRINTED BY D. LESLIE, 22 ST. JOHN STREET.

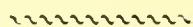
MUSEUM REGULATIONS.

The Museum is open Daily--

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY and SATURDAY, 6 to 8 p.m.



ADMISSION FREE.



PERTHSHIRE
NATURAL HISTORY MUSEUM,
PERTH.

ALEX. M. RODGER,
CURATOR.

With the Curator's compliments.



CITY OF PERTH.

Perthshire Natural History
Museum.



Report of the Museum Joint-Committee

TO

The Town Council,

FOR YEAR ENDING MAY 15TH, 1907.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1907.

MUSEUM JOINT-COMMITTEE.



Members of Council.

Lord Provost CUTHBERT, *Chairman.*

Councillor CALDERWOOD.
,, CROMBIE.
,, CRYSTAL.
,, HAMILTON.

Councillor JARVIE.
,, MACKAY.
,, MACNAB.
,, SCOTT.

Member of Perth County Council.

Mr. W. T. J. S. STEUART FOTHERINGHAM.

Member of Perth School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

Mr. WM. BARCLAY.
,, A. W. BROWN.
,, JAMES COATES.

Mr. S. T. ELLISON.
,, JAMES MORISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

JOHN YOUNG, *Janitor.*

Perthshire Natural History Museum.

PERTH.

*Report of the Museum Joint-Committee
for the Year ending May 15th, 1907.*

To the Lord Provost, Magistrates and Town Council.

GENTLEMEN,

The Joint-Committee of the Perthshire Natural History Museum has pleasure in submitting its Fifth Annual Report.

The Museum fabric and fittings are in good repair. A number of improvements and alterations have been made since the last Report.

The most important alteration was the extension made to the first upright case in the Index Museum, whereby an additional space of two feet has been given to the width of the case. The case now measures 12 ft. 9 ins. \times 4 ft. 9 ins. inside. It was further strengthened by carrying T iron along the inside of the astragals, and the fitting of whole sheets of plate-glass in both ends of the case. The latter gives an uninterrupted view of the whole interior. The thanks of the Committee are due to Mr. McLaren, of the Burgh Surveyor's Office, for drawing up the specification for these alterations. It is intended to exhibit a number of Arctic animals, with natural surroundings, in this case, and the material is now well in hand.

The first edition of the Handbook to the Museum having been exhausted, a second edition was prepared and issued. A large issue having been contracted for, your Committee were enabled to improve the book in several respects. A better paper was chosen, a number of new illustrations were added, and the size of the book was reduced to one adapted for carrying in the pocket.

A small exhibition of named wild flowers has, as hitherto, been placed in the Lecture Room during the Summer months, for the use of beginners. The Committee is indebted to Miss Thomas and other members of the Perthshire Society of Natural Science, who collected and named the material from week to week.

There were 99 essays sent in last year on the "Land and Fresh-water Shells of Perthshire and their Inhabitants," 59 from boys and 40 from girls. The circulars for this year's essay have been issued to all schools in the City and County, the subject being "Four objects in the Perthshire Natural History Museum that interest me most."

Special facilities were granted to one student to examine and work at the duplicate rock collections in the Museum; while on several occasions similar privileges were extended to students in Art.

The number of Natural History specimens borrowed for teaching purposes was 195, as against 219 last year; while applications for information in pure and applied natural history were 95, compared with 76 for the previous year.

The use of the Museum buildings was granted on two occasions for special purposes, viz.:—Class Teachers' Association Conversazione. The Gas Department of the Corporation were granted the use of the Lecture Room to exhibit methods of Heating and Lighting in Schools. They were good enough to leave the overhead supply pipe, which has improved the lighting in the room. There were 75 meetings in the buildings, exclusive of those of the Perthshire Society of Natural Science. There were also 16 visits of school children in classes accompanied by their teachers.

Information on Museum cases, dimensions, material, fittings, &c., was supplied to four Museums, and a set of case fittings is at present on loan.

During the Winter months a course of twelve Lectures and demonstrations on Agriculture was given in the Museum Lecture Room, by Mr. W. Bruce, B.Sc., under the auspices of the Edinburgh and East of Scotland Agricultural College and the Perthshire County Council. The course was attended by about 50 students, and was much appreciated.

The Committee is much indebted to the local newspapers for their courtesy in inserting notes on donations to the Museum.

The number of visitors to the Museum for the year ending May 15th was 16,985, as against 16,127 last year—making a total of 193,447 since the opening.

The Perthshire or Local Museum.

The specimens acquired by the Museum during the past year will be found recorded in the List of Additions at the end of this Report.

There were two remarkable additions to the Mammal collections, one being a specimen of the Common Bat, in which the hair is almost black. The specimen was submitted to the keeper of the Royal Scottish Museum (see *Annals of Scottish Natural History*, 1906, p. 236), and identified as an example of melanism. The other specimen is that of the Black Rat, from Arbroath, a species which is probably extinct in the area.

A number of very rare birds have come into our possession. A series of 11 species from the collections of Dr. T. F. Dewar and Dr. W. J. Dewar, of Arbroath, is a most valuable one, including such rarities as the Golden-Oriole, Montague Harrier, Black-tailed Godwit, &c.

A specimen of the Bittern is also a very rare and valuable addition. Our previous specimen was taken near Stormont Loch in 1864.

The Committee is indebted to Mr. P. D. Malloch for the marked example of Salmon Grilse. The interest of this specimen lies in the fact that it is one of a number which were marked by means of a fine wire passed through and twisted over the dorsal fin, and placed in the river while in the smolt stage, in May, 1905. The fish was re-taken on 1st June, 1906, and thus affords clear evidence of age and growth. An account of the experiment appears in the *Proceedings of the Royal Society of Edinburgh*, vol. 26, p. 321.

Twelve glass-topped trays were added to the Insect Cabinets.

Mr. William Wylie and his son have made numerous additions to the Diptera (flies) collections. The latter undertook to extend and transfer these collections to the new cases.

The samples of sand, gravel, clay, &c., taken at various depths in Kinnoull Street, along with the section drawn to scale, is an important donation from Messrs. J. Pullar & Sons. It would obviously be of great use and interest to possess such examples from various parts of the City.

The fifth Geological Store Cabinet, under the gallery rail, was added, and the series stained and polished, so that continuity has been given to the whole. The trays in these cabinets have, as far as possible, been overhauled, and glass covers placed over each, to reduce to a minimum the possibility of dust.

A series of family labels, indicating the distribution of each family in Europe, in Britain, and in Perthshire, were printed, mounted, varnished and placed alongside each group of mammals, birds, reptiles, amphibians and fishes. All the cases, excepting the mammals, were overhauled and cleaned. It is five years since this was last done, a fact which bears out the excellence of the cases.

A relief-map, in stucco, of the southern portion of Perthshire and the Basin of the Tay has been purchased, and placed in position in the Geological case. It was carefully measured out and coloured from the geological survey maps by Miss Lowe and Mr. Rodger.

The Index, or Type Museum.

Reference has already been made to the progress of the Arctic Regional Case. The space being at present vacant, the offer by Dr. W. S. Bruce of the loan of a series of photographs, taken by the staff of the "Scotia," during the Scottish National Antarctic Expedition was accepted, and these formed an additional attraction during the early months of this year.

There was also received from Dr. Bruce, six representative birds from the Antarctic regions, taken during the same expedition.

The Committee is again indebted to the Education Department for the aid granted by them to this Museum, to purchase a set of models illustrating the Life History of the Chick. They have also promised a grant towards the construction of the Arctic Regional Case.

A series of descriptive labels has been prepared, and placed with the plant models referred to in the last Report.

The fossil Fish-lizard, *Ichthyosaurus multiscutus*, reported last year, has now been placed in position over the Reptile Case.

JAMES CUTHBERT,

Chairman of Committee.

ALEX. M. RODGER,

Curator.



ADDITIONS TO THE MUSEUM.

** Perthshire Collections.*

MAMMALS—

- *Bat (melanism)—Mr. Alexander Mackenzie.
- Bat, 3 specimens, Paraguay—Mr. V. V. Branford.
- Porcupine—Mr. Charles Kirk.
- *Shrew, male—Mr. John Young.
- *Black Rat—Drs. T. F. and W. J. Dewar.
- Buffaloes. Photograph, Banff, Canada—Mr. H. Coates.

BIRDS—

- *Starling (pale eggs)—Mr. Alex. M. Rodger.
- *Sparrow (dark eggs) „ „
- *Ringed Plover (eggs) „ „
- Cuckoo, Cape Colony—Mr. James Drury.
- Red Bishop bird, Cape Colony—Mr. James Drury.
- Cape Grass bird, „ „
- Taka, „ „
- *Tern (eggs)—Mr. Wm. White.
- *Robin (pale variety)—Mr. John Dewar, jun.
- *Hedge Sparrow (nest)—Mr. James Clayton.
- *Shrike—Mr. John Strachan.
- *Wren, male—Mr. John Dewar, jun.
- *Goldeneye, male—Mr. Duncan M'Naughton.
- *Knot—Mr. W. A. Ramsay.
- *Bittern, female—per Mr. Alex. M. Rodger.
- *Waterhen, male ($15\frac{1}{2}$ oz.)—Mr. W. Dow.
- *Slavonian Grebe, female—Mr. A. Dunn.
- Eggs of Snow Goose, Snowy Owl, Black Guillemot, Raven,
Glaucous Gull, Fulmar Petrel, Phalarope, Snow Bunting,
Lapland Bunting—Capt. Wm. Milne.
- *Golden Oriole, female—Dr. T. F. and Dr. W. J. Dewar.
- *Wryneck „ „
- *Montague's Harrier, male „ „
- *Montague's Harrier, female „ „
- *Red-legged Partridge „ „
- *Purple Sandpiper „ „
- *Knot „ „
- *Bar-tailed Godwit, male „ „
- *Black-tailed Godwit „ „
- *Skua, 2 specimens „ „
- *Fulmar Petrel „ „
- *Puffin „ „

BIRDS—*continued.*

Birds, 93 species, Paraguay, S. America—Mr. V. V. Branford.
 Emperor Penguin—Scottish National Antarctic Expedition,
 per Dr. W. S. Bruce.

Black-throated Penguin „ „

Ringed Penguin „ „

Giant Petrel, 2 specimens „ „

Skua „ „

Life History of the Chick, 27 models purchased—Grant in aid
 from the Education Department.

REPTILES AND AMPHIBIANS—

*Adder—Mr. A. R. Wilson.

FISH—

*Salmon, marked Smolt, captured as Grilse—Mr. P. D. Malloch.
 Shark Jaws—Mrs. D. S. Grant.
 Dogfish—Mr. F. H. Ind.
 Salmon Ova—Mr. A. Lumsden.

INVERTEBRATES—

Molluscs, 45 specimens of Shells, Africa—Mr. James Drury.

*Molluscs, *Helix hispida*, *H. rotundata*, *Vitrina pellucida*—Mr. Wm. Wylie, jun.

Scorpions, 6 specimens, India—Mr. James Pitcaithley.

Centipedes, 2 „ „ „

Tarantula, India „ „ „

Beetles, Africa—Mr. James Drury.

*Wasp, nest on currant twig—Miss Jamieson.

*Moths—Caterpillars of Puss, Kitten, Dagger, Peebles prominent, Iron prominent, Coxcomb prominent, Early thorn, Small chocolate tip—Mr. Wm. Wylie.

*Moths—Life History of *Abraxas grossulariata*, *Halia wavarria*, *Cidaria prunata*—Mr. Wm. Wylie.

*Diptera, 19 species flies—Mr. Wm. Wylie.

*Sawflies, 4 „ „

*Cloth Moths, 1 „ „

Lepidoptera, 133 specimens, Paraguay—Mr. V. V. Branford.

Umbellula durissima, Scot. Nat. Ant. Expedition—Dr. W. S. Bruce.

Microscope Slides, 12 specimens—Mr. G. F. Bates, B.A., B.Sc.

BOTANY—

Timber, 10 microscope slides—Purchased.

Timber, *Pinus sylvestris*, 3 microscope photographs—Mr. G. F. Bates, B.A., B.Sc.

GEOLOGY —

- *Andesite, Ice-marked, Sidlaws—Mr. A. Gray.

*Andesite, showing chlorite, Sidlaws—Mr. A. M. Rodger.
Crocidolite, South Africa—Mr. James Drury.

*Agate (blue and red, polished), Sidlaws—Mr. Henry Walker.

*Rock, fused, from vitrified fort, Dun Mhor—Mr. A. S. Reid,
M.A.

Fish, old red sandstone, Orkney—Mr. James Coates.

Kauri Gum, New Zealand—Sir R. Pullar, M.P.

*Clay Nodules (from 14 ft. below surface)—Mr. A. W. Brown.
Olivine, part of volcanic bomb—Mr. S. J. Shand, B.Sc., Ph.D.

Trilobite, *Phacops schlotheimi* „ „
Minerals, New Zealand—Ambrite, Wollastonite, Hypersthene,
Anthophyllite, Dunite, Cinnabar, Rhodonite, Asbestos,
Serpentine, Chlorite, Chromite—Mr. Walter Kerr, M.A.

*Carboniferous Fossils, Dron—Mr. Alex. M. Rodger.

*Carboniferous Fossils, Dron—Mr. A. Gray.

*Upper Old Red Sandstone, Carse of Gowrie—Messrs. Bates,
Graham and Rodger.
Chalk Fossils, South England—The Brighton Museum.

*Clay, Gravel, Sand, Wood, &c., Cutting—Mr. A. E. Pullar.

*Axe, fine grained Basalt, near Perth—Mr. G. C. Roy.

*Geological Relief Map, Southern Perthshire and Basin of Tay.
Purchased ; drawn and coloured—Miss Low and Mr. Alex.
M. Rodger.

Geological Map of British Islands, 25 m. to 1 in.—Geological
Survey Museum, London.

Stone, Bronze and Early Age Handbooks—British Museum.

Robinson Goldmine, South Africa. Photograph of Workings—
Mr. Charles Masterson.

Deep Sea Deposits—Green Sand. Glauconite, Concretions,
Manganese Nodules, Globigerina ooze, Grey ooze, Radio-
larian ooze, Diatom ooze—Mr. F. G. Pearcey, per A.M.R.

Silk for Netting—Mr. W. A. Anderson.

PRESENTED

2 JUL 1907



TAY STREET, PERTH.



MUSEUM

COUNTY BUILDINGS

VICTORIA BRIDGE



CITY OF PERTH.



Perthshire Natural History Museum.



REPORT, 1907-08.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

—
1908.

MUSEUM REGULATIONS.



The Museum is Open Daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY and SATURDAY, 6 to 8 p.m.



ADMISSION FREE.



CITY OF PERTH.



Perthshire Natural History
Museum.

Report of the Museum Joint Committee

TO

The Town Council,

FOR THE YEAR ENDING 15TH MAY, 1908.



Perth :

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

—
1908.

MUSEUM JOINT-COMMITTEE.



Members of Council.

Lord Provost CUTHBERT, J.P., *Chairman.*

Bailie FORREST.

Councillor CALDERWOOD.

„ CROMBIE.

„ CRYSTAL.

Councillor HAMILTON.

„ MACKAY.

„ MACNAB.

„ SCOTT.

Member of Perth County Council.

Mr. W. T. J. S. STEUART FOTHERINGHAM.

Member of School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

Mr. W. BARCLAY.

„ G. F. BATES.

Mr. J. MORISON.

Mr. A. W. BROWN.

„ S. T. ELLISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

JOHN YOUNG, *Janitor.*

Perthshire Natural History Museum.

*Report of the Museum Joint Committee
for the Year ending 15th May, 1908.*

*To the Hon. the Lord Provost, Magistrates and Town Council
of Perth.*

GENTLEMEN,

The Joint Committee of the Perthshire Natural History Museum has pleasure in submitting its Sixth Annual Report, being the Twenty-fifth Report and year of the Museum.

The fabric throughout the building is in good repair and the specimens in good condition.

During the year there were 111 applications for information in different branches of Natural History, both pure and applied. These questions form an important feature in the Museum's work for the City and County, and were of a very varied character, viz.:—The simple naming of Natural History specimens and their habitat; the nature and formation of the ground in certain districts; the life history of the house fly and the cause of its great abundance (nuisance) in certain places; the occurrence of aquatic larvae of flies in domestic water; bee parasites; period of twilight on a particular day; weather on a particular day and time, etc.

The loans of Natural History specimens to schools have been of a more varied character this year than formerly, and the applications for material and aid continue to increase. Numerous visits were made by school classes, accompanied by a teacher; for the larger classes the lecture room was used. The number of boys and girls who come in their own time with questions and material for identification is a very pleasing feature in this connection.

The weekly exhibits of wild flowers in June and July of last year were marred somewhat by the weather. Some 226 plants were shown in the lecture room, and the Committee is indebted to Miss Thomas and others for this useful piece of work.

The Committee is also indebted to Mr. Lumisden, the Fishery Board Superintendent, for a number of salmon ova. These were hatched in the laboratory, and were visited by a great number of people. The young fry were shown under a microscope, and the visitors had an opportunity of seeing the more important functions going on in the developing fish.

In spring frogs' eggs were hatched out; these, along with other living aquatic animals, are very popular with visitors.

Special privileges were granted to students in the study of museum material, and the loan of the collection of Perthshire Grossularite was granted Dr. Shand, of the Royal Scot. Museum, Edinburgh. The results of his investigations has since been published and the material returned. Two artists also made use of natural history specimens in the building for purposes of study.

The Antarctic Photographs, intimated in the last report as on loan from Dr. Bruce, have now been returned. The exhibit was much appreciated.

The Museums' Association held its annual meeting last July in Dundee, and devoted a day to Perth. Fine weather enabled the members to see the city and surroundings at its best. A report on that meeting was read to a meeting of this Committee, 3rd September last, conveying many expressions of thanks and appreciation of the visit to Perth.

During the year we have again had a number of specialists and others interested in museum technique conducted over the museum—those from Oxford, Cambridge, Edinburgh, Dundee, Aberdeen, Bolton, Bombay, Hakadato, etc., being of the more important. Special visits also were made by representatives from Hamilton and Coatbridge.

Information on case fittings, etc., was supplied to nine museums—5 English, 1 Colonial, 1 Foreign, 2 Scottish, five of whom borrowed samples of the fittings.

The classes on Nature Study arranged for Teachers by the Technical Institute, and the Students of Botany from University College, Dundee, visited the museum. A special visit was made by the Perth Class Teachers also. Twelve arranged visits were thus made, and 350 students were conducted over the museum and had the main plan pointed out to them.

The number of meetings held in the buildings was 104, including a successful course of 13 lectures and demonstrations in Agriculture by Mr. W. Bruce, B.Sc., of the Edinburgh and East of Scotland College of Agriculture, under the auspices of the Perthshire County Council. The course, which was a second year one, was attended by 35 students.

An endeavour is being made to arrange a course in practical Horticulture and Fruit Growing for next year.

A class for the study of Esperanto was formed in the city in March, and applied for and were granted the use of the lecture room. About 100 members joined, and two classes were arranged.

The instruments of the Scottish Meteorological Society are now in our keeping. Observations are recorded twice each day, and reports sent each week to the Registrar General, monthly to the Meteorological Society and Symon's Meteorological Magazine. The observations are also at the disposal of the local papers each week.

The Committee is much indebted to the local newspapers for their courtesy in inserting notes on exhibits and donations to the museum.

The total number of visitors recorded during 1907 was 20,120, as against 16,985 last year, making a total of 213,532 since the opening.

The Perthshire or Local Museum.

The specimens added to this collection during the year are indicated by an * in the list of additions on p. 7.

The cases on the ground floor have been carefully gone over, and a number of new labels printed and added.

With the assistance of Mr. Anderson a Peregrine Falcon was equipped with hood and other fittings used in the sport of Falconry.

In the gallery Cabinet No. 30 was fitted with runners to carry a series of insect drawers.

The sixth gallery Rail Cabinet has been built in, the corner panelling completed, and three dozen trays made for the case. This space has been used for the extensive reference collections of eggs, a considerable accession to which has been made this year.

The Index or Type Museum.

The labels in the Coelenterate Case, Nos. 3 and 4, have been written and attached to the specimens. Several specimens were remounted and suitable backgrounds painted in.

In Case No. 10—Centipedes, Spiders, etc.—the specimens have now been arranged and mounted on tablets with their accompanying labels.

The Skeletons of the Emperor Penguin and the Giant Petrel, reported last year from the Scottish National Antarctic Expedition, have been mounted and placed in the Bird Case. The Brown Crane, reported two years ago, has also been mounted and placed in the case.

The Arm of a Black Whale received in 1901 from Captain Adams has now been prepared, mounted, and will shortly be placed in the mammal collections in the Index Museum.

The Arctic Case referred to in the last report is now completed, and is an exhibit of much interest. The case measures 12 feet by 5 feet, and shows a handsome female Walrus and young resting on a large "pan" of ice abutting on the land. Appearing in a hole in the ice floe is a Seal. On the land margin is a young Polar Bear, alongside which is the remains of an Musk Ox head; on the high ground is an Arctic Wolf; while on the other side, appearing from an opening in the rock, is an Arctic Fox. Several Arctic birds lend effect to the scene. The case was designed by the Curator, and the work carried out by Mr. Charles Kirk, and is a handsome example of taxidermal art.

It may be of interest to note that the contents weigh 9 cwts., the Walrus alone turning the scale at 5 cwts.

The Committee is very grateful to the Education Department for the government grant in aid of 50 per cent. towards the cost of mounting the material for the above case.

JAMES CUTHBERT,

Chairman of Committee.

ALEX. M. RODGER,

Curator.



ADDITIONS TO THE MUSEUM.



** Perthshire Collections.*

MAMMALS—

- Arctic Fox—Purchased.
- Seal, head (Loan)—Mr. H. S. Pullar.
- *Rat—Commissioners' Yard.
- Arctic Case—Partially presented, purchased, and government grant in aid.

BIRDS—

- *Carrion Crow, male—Mr. H. S. Pullar.
- *Starling, female—Master P. Meldrum.
- *Dunlin, female—Col. Campbell.
- *Quail, male—Mr. W. Anderson.
- *House Martin, female—Master Robert Marshall.
- *House Martin, male—Master Alex. M'Glashan.
- *Swift, male—Master James R. Leslie.
- *Curlew, young—Mr. James Dow.
- *Corn Crake (eggs)—Mr. James Coates.
- *Whitethroat (nest and eggs)—Mr. James Bain.
- *Eggs, 32 species—Mr. John Reid.
- Eggs (Ringed Plover, Snow Bunting, Arctic Tern, Red Throated Diver)—Captain Milne.
- Eggs (Snow Bunting, Red T. Diver)—Captain Adams.
- Eggs (Cuckatoo)—Mr. James Edwards.
- Eggs (Alexandria Ringed Parraquet)—Miss Welsh.

REPTILES, AMPHIBIANS—

- *Newts (3 young, 1 adult)—Master A. Menzies.

FISH—

- *Salmon Ova—Mr. A. Lumsden.
- *Salmon Smolt, 2 years (extremes in size and weight)—Mr. P. D. Malloch.
- *Salmon Head—Mr. T. Stewart.
- *Fishing Frog (*Lophius piscatorius*)—Mr. G. S. Chambers.

INVERTEBRATES—

- Shells, Cerithium sp., Section—Exchange.
 Pearly Nautilus Shell and Section—Mr. H. Coates.
 *Pond Snails—Mr. A. M. Rodger.
 *Insects, Tipulidae, 20 sp.
 ,, Dragonflies, 5 sp.
 ,, Ichneumons, 8 sp.
 ,, Sawflies, 4 sp.
 ,, Hymenoptera, 9 sp.
 ,, Woodlice, small collection—Mr. Wm. Wylie.

BOTANY—

- Lichen, Sphaerophoron Coralloides—Mr. Craigie.
 Tree Sections, 5 microscope photographs, Bamboo, Broom,
 microscope slides—Mr. G. F. Bates, B.A., B.Sc.
 *Larch, photographs of parent larches—Mr. H. Coates.

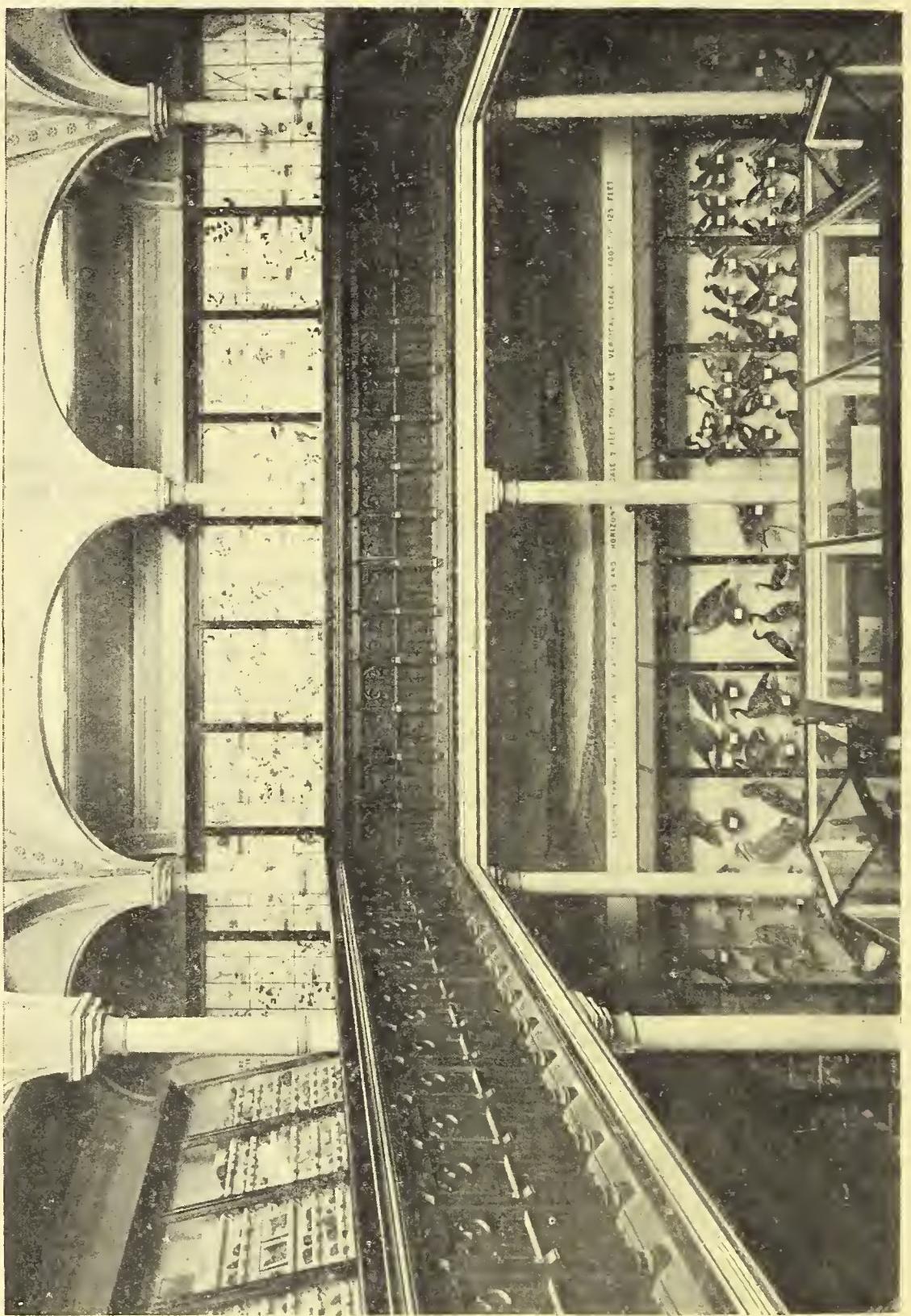
GEOLOGY—

- *Rock Sections of Dolerite, Porphyrite, Andesite Tuff, Amygdaloidal Andesite, Olivine Andesite, microscope slides and photographs—Mr. G. F. Bates, B.A., B.Sc.
 *Granite, Gabbro-schist—Mr. G. F. Bates, B.A., B.Sc.
 Carboniferous Limestone Fossils—Mr. H. Coates.
 Ammonite and Section—Mr. H. Coates.
 Gold Quartz—Exchange.
 Agates, 10 polished—Mrs. Underwood.
 *Agates, a number—Mr. A. Gray.
 *Hæmatite Iron, local—Mr. A. Gray.
 Minerals, 100 type sp. Cornwall—Hon. Mrs. Francis Drummond.
 *Granite, Limestone, Mica-diorite, Dolerite, Felstone, Micaschist, Gabbro, Diorite—Mr. Alex. M. Rodger.
 Fish Spine (fossil), *Gyrocanthus formosus*, Ag.—Mr. A. Dunlop.
 Diabase Diorite (Glen Lednock)—Mr. A. M. Rodger.
 *Arrow Heads (flints, Tents' Muir, Exchange)—Mr. Mason.
 Arrow Head (flint)—Miss Young.
 *Shells, Bones, Pottery, etc., from Tents' Muir—Dr. Shand.
 *Chromite, Blend and Galena, Actinolite, Chrysotile—Dr. Shand.

PRESENTED

11 JUL. 1908





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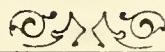
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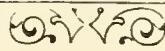
CITY OF PERTH



Perthshire Natural History Museum



REPORT, 1908-09



Perth:

PRINTED BY D. LESLIE 20 ST JOHN STREET

1909

MUSEUM REGULATIONS.

—————*

The Museum is open daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY, SATURDAY, 6 to 8 p.m.

—————
ADMISSION FREE.



CITY OF PERTH



Perthshire Natural History
Museum



Report of the Museum Joint Committee

TO

The Town Council

FOR THE YEAR ENDING 15TH MAY, 1909.

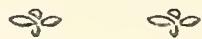


Perth:

PRINTED BY D. LESLIE 20 ST JOHN STREET

—
1909

MUSEUM JOINT-COMMITTEE.



Members of Council.

Lord Provost CUTHBERT, J.P., *Chairman.*

Bailie FORREST.

Councillor CRYSTAL.

Councillor CALDERWOOD.

,, HAMILTON.

,, CLARK.

,, MACNAB.

,, CROMBIE.

,, SCOTT.

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Mr. W. T. J. S. STEUART FOTHERINGHAM.

Member of School Board.

Mr. T. B. YOUNG.

Members of the Perthshire Society of Natural Science.

Mr. W. BARCLAY.

Mr. J. COATES.

,, G. F. BATES.

,, S. T. ELLISON.

,, A. W. BROWN.

,, J. MORISON.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

W. SCRIMGEOUR, *Janitor.*

Perthshire Natural History Museum.

*Report of the Museum Joint Committee
for the Year ending 15th May, 1909.*

*To the Hon. the Lord Provost, Magistrates and Town Council
of Perth.*

GENTLEMEN,

The Joint-Committee of the Perthshire Natural History Museum has pleasure in submitting the Seventh Annual Report, being the Twenty-sixth year and Report of the Museum.

The fabric has received the following attention. The slating on the roof was examined, some leakages located and repaired, a roof-light at the top of the staircase was raised, and a framework built in to carry sliding doors to facilitate access to the roof.

All paint work in the Museum (except inside of the cases) has been washed down with soap and water, and the stippling on the roof-lights renewed. In the local Museum the roof-lights have been fitted with spring roller blinds; the parquet flooring has likewise been washed, treated with varnish, and afterwards waxed. The above improvements amply repay the trouble involved, while the convenience in being able to admit and regulate the amount of light is great, as well as affording a saving in artificial light.

A seventh case has been added to the gallery rail cabinet; it will be more fully utilised as soon as the necessary trays are acquired.

The number of specimens borrowed for teaching purposes was 162; more use will no doubt be made of duplicate material in the Museum, in this direction, as the facilities offered become more widely known.

As in former summers, a collection of named wild flowers were on view in the Lecture room. The work involved in collecting, changing and labelling each week was undertaken by Mr. David Campbell, with occasional help from other members of the Perthshire Society of Natural Science. Altogether some 290 plants were shown. The exhibits were well patronised, and the Committee is much indebted to all those who assisted in this useful work.

Trout as well as salmon ova were hatched out in the Laboratory this year. The process of hatching was a source of much interest, and the appearance of the young fish under the microscope was a fascinating exhibit to a large number of appreciative people. The Committee's thanks for the salmon ova are due to Mr. A. Lumsden, Fishery Superintendent.

There is a distinct increase in the number of persons using the Museum in search of information in different departments of natural history. The questions asked are of a very varied character, many of them have a practical bearing. The amount of material brought for identification this year has also been considerable.

Seventy-one meetings were held in the buildings. As indicated in last year's report, a course of twelve lectures and demonstrations in practical horticulture was given by Mr. Berry of the Edinburgh and East of Scotland College of Agriculture. The lectures were arranged by the Perthshire Horticultural Society, and subsidized by the County Council of Perthshire. The course was highly successful.

Special visits were made to the Museum by the Nature Study Classes of the Teachers' Training College, Dundee; the students of the Natural History Department in University College, Dundee; touring students; upper standard pupils with their teachers from several of the local schools. A number of students in Art and in Science were from time to time granted access to material for study; also many of the young folks who were preparing for the Essay Competition, set by the Perthshire Society of Natural Science last year, on "The Teeth of Animals."

The weather observations were taken daily at 9 a.m. and 9 p.m. A chart of the same is on view in the window of the Lecture Room. The monthly averages and extreme readings of these records appear at the end of this Report. Returns were sent each week to the

Registrar General; monthly reports in full to the Scottish Meteorological Office. The British Rainfall Office was supplied with the annual return; Symons' Meteorological Magazine and the Manager of the Waterworks with the rain returns for each month. The observations are at the disposal of the local press each week.

The Committee is indebted to the local press for their courtesy in publishing occasional notes on exhibits and donations to the Museum.

The number of visitors to the Museum for the year was 16,459, making a total of 229,991 since the opening. The annual average number of visitors for the last ten years is 15,081.

The Perthshire or Local Museum.

The specimens added to this collection during the year are indicated by an (*) in the list of additions on pages 7 and 8.

The birds added have each been mounted with the view to illustrate some characteristic position, viz., the Hooper Swan and the little Grebe as in swimming; the others in the attitude of flight.

To the fish case were added three preparations of young salmon of known age, and a series of young Trout; a glass tank showing a Fishing-frog in natural surroundings. This is a small example of a somewhat common shore fish, taken in the brackish water of the Tay within the County. It has not been noted before. There was also added a mounted series of illustrations of Salmon scales, to show the ages of these fish.

A mounted preparation to show the development of the Frog, and the age of each stage, was placed in the case.

The land and freshwater shells have been remounted into tubes, labelled and arranged in accordance with the classification of the Conchological Society; and placed in the new gallery cabinet. I am indebted to Fred Smith, a member of the Junior Section of the Society, for assistance in this work, as well as for specimens of four new species found by him in the County.

The arctic shells from the Carse clays are from a locality previously unrepresented in the Museum.

The Spider (*Meta menardi*) is also new, though recorded for the south-west border of the County.

The Index or Type Museum.

The whole of the exhibition specimens in spirits or in formalin were examined, and, where necessary, recharged.

A number of valuable additions were made to the collections, chief among which are the series of vertebrate animals; double preparations in which the mounted skeleton is seen on one side, on the other the mounted skin.

The Committee records its thanks and appreciation of the grant in aid of 50 per cent. from the Education Department, given towards the purchase of the above and other specimens indicated † in the list of additions.

JAMES CUTHBERT,

Chairman of Committee.

ALEX. M. RODGER,

Curator.



ADDITIONS TO THE MUSEUM.

**Perthshire Collections.*

†*Grant Received.*

MAMMALS—

Bulldog Skull, male—Mr. W. A. Stewart, L.D.S.

Paca Skull—Purchased.

Squirrel „

Hedgehog „

Ca' ing Whale Skull, young—Mr. A. M. Rodger.

Polecat, double preparation—† Purchased.

Bat, „ „ „

Mole, „ „ „

Hedgehog, „ „ „

Squirrel, „ „ „

BIRDS—

*Willow Wren, Cornbunting, Starling, Greenfinch, Partridge, Goldcrest, Blackheaded Gull Eggs—Mr John Reid.

*Dipper, Bunting, Chaffinch, Sparrow, Wren, Partridge, Blackbird, Starling, Songthrush, Sandpiper, Carrion Crow, Common Gull, Great Blackbacked Gull Eggs—Mr. D. M'Naughton.

Parraquet Egg—Mr. S. R. Welsh.

*Sparrow, male—Rev. J. M. Strachan, M.A.

*Herring Gull, young—Mr. R. H. Meldrum.

*Great Spotted Woodpecker, male and female—Mr. W. Steuart Fotheringham.

Pigeon—† Purchased.

Nest of Tailor Bird—† Purchased.

Snow Goose 2, Greenland Falcon 2, Eggs—Capt. W. Milne.

*Gadwall, female—Mr. John H. Middleton.

*Stockdove, female—Mr. Alex. Speedie

*Redwing, Bullfinch, Long-tailed Tit, Siskin—Mr. R. D. Pullar

*Dabchick—Mr. R. Winton.

*Hooper Swan, female—Mr. George S. Chambers.

*Kingfisher—Mr. D. Gibb.

REPTILES AND AMPHIBIANS—

Lizard Skull—† Purchased.

Edible Frog, double preparation—† Purchased.

*Frog, Life History and Age—Mr. A. M. Rodger.

FISH—

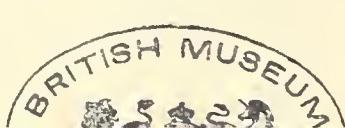
- *Salmon Ova—Mr. A. H. Lumsden.
- Salmon, illustration of scales—H. W. Johnston.
- Trout Ova—† Purchased.
- Shark Jaws—Mr. J. Davidson.
- Stickleback, Life History Series—† Purchased.

INVERTEBRATES—

- *Death's Head Moth—Mr. T. Greig.
- * ,, ,, Mr. J. Smith.
- *Spiders' Egg-cocoons (*Meta menardi*)—Mr. A. S. Reid, M.A.
- *Wasp's Nest (*V. norwegica*)—Mr. R. G. Thomson.
- *Wood Wasp (*Sirex juvencus*)—Mr. G. Gray.
- *Goat Moth, larvae and bored Oak —Mr. W. Steuart Fotheringham.
- *Shells—*Hyalina lucida*, Drap., *Hygromia rufescens*, Pen., *Sphaerium lacustre*, Müll., *Pisidium amnicum*, Müll., *A. aculeata*, *L. peregra*, *L. palustris*, *P. fontinalis*, *S. corneum*—Mr. F. Smith.
- *Shells from clay beds—*Neilo arctica*, Gray, *Pecten abyssorum*, Sov., *Natica*, sp.—Mr. W. Gilmour.
- Swan Mussel, showing nerve system—† Purchased.
- Crayfish, ,, ,, ,,
- Leech, ,, ,, ,,
- Honey Bee, life history series—† Purchased.
- Silk Moth, ,, ,,

GEOLOGY—

- *Sand, Lamprophyre, Porphyry "Strowan type," Quartz porphyrite—Mr. G. F. Bates, B.A., B.Sc.
- *Slate—Mr. A. M. Rodger.
- *Oak, Peat—Mr. J. W. Bayne.
- *Agates, Hämatite—Messrs. Gray & Rodger.
- Fossil Plants (Greenland)—Capt. Adams.
- *Aragonite—Mr. A. Gray.
- *Shells from clay beds, Tay—Mr. W. Gilmour.
- *Flint Scraper—Mr. G. Valentine.
- *Flint Scraper and Chips—Mr. Cunnison.
- Flint Implements—Miss Layard.
- *Urn, portion of rim—Mr. R. Gloag.
- Esquimaux Kayak (model)—Miss Plenderleith.



PRESENTED
1 MAR 1910

METEOROLOGICAL OBSERVATIONS.

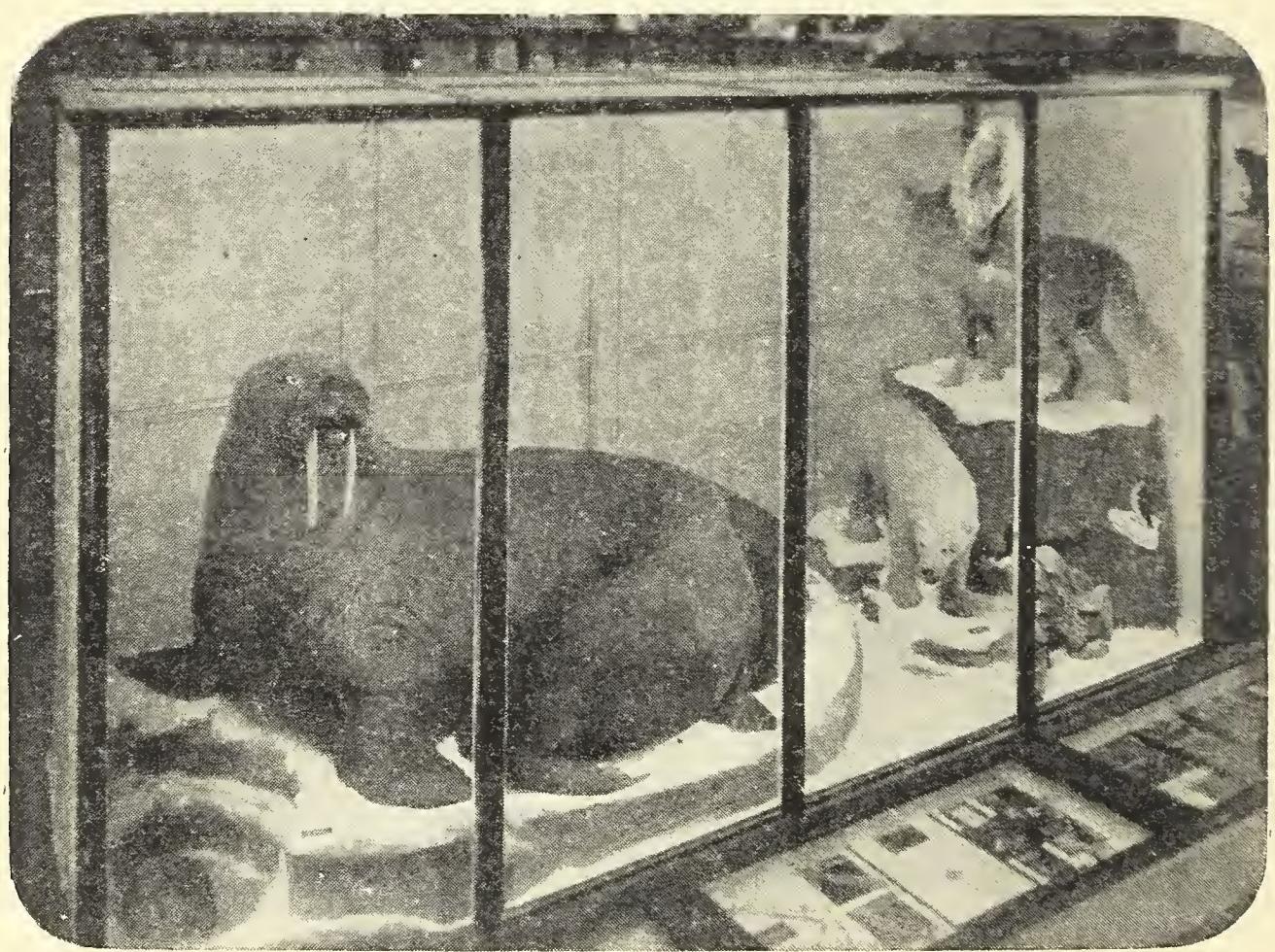
ALEX. M. RODGER.

MUSEUM—PERTH, 1908.

MONTH.	BARO-METER	THERMOMETERS.						HYGRO-METER.						WINDS.						RAIN.						REMARKS.					
		Sea Level and 32° Mean.	Maximum Temperature.	Mean Temperature.	Minimum Temperature.	Date o	Date o	Date o	Date o	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	Calm.	Days 01 or more.	Difference from Average.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.						
JANUARY, -	29.994	52	17	41.	18	4	31.9	36.9	-0.21	18	36.2	34.4	85	2	1	4	3	0	5	19	7	21	9	-5.28	1.89	-0.68	.61	7	—		
FEBRUARY,	29.889	54	8	47.5	28	29	34.9	41.2	+3.93	11	39.2	37.1	83	6	0	0	0	0	3	22	12	15	10	-2.32	1.24	-0.91	27	21	Snow, 28th.		
MARCH,	29.759	54	29	44.9	24	13	32.	38.5	-1.2	17	37.2	35.3	83	3	3	9	6	1	5	10	1	24	17	+2.92	3.97	+1.575	1.22	24	—		
APRIL,	30.000	67	17	49.6	*8.5	24	33.3	41.5	-2.66	11	40.4	38.	81	6	10	8	5	1	1	7	3	19	11	+0.47	0.92	-0.86	.25	8	Snow, 22nd, 23rd, 24th		
MAY,	29.915	81	28	60.8	35	22	44.6	52.7	+3.21	—	51.4	48.3	80	1	7	14	8	6	19	5	1	1	22	+8.7	1.86	-0.20	.41	8	Thunder & Lightning, 30th.		
JUNE,	30.045	*85	27	66.8	39.5	12	48.7	57.8	+2.13	—	55.9	52.	76	1	7	8	7	8	15	7	7	0	14	+3.86	1.68	-0.28	.3	16	—		
JULY,	29.959	*88	2	68.2	39	19	48.8	58.5	+0.33	—	58.8	54.7	76	3	4	9	16	6	17	6	1	0	14	-0.56	2.11	-0.84	.4	8	Thunder, 2nd.		
AUGUST,	29.904	79	2	67.8	34	12	46.9	57.4	+0.4	—	56.1	52.2	75	3	3	10	5	1	17	18	5	0	16	-0.17	2.93	-0.56	.55	24	Thunder & Lightning, 24th, 25th; Hail, 28th		
SEPTEMBER,	29.842	69	17	60.3	33	5	47.1	53.7	+0.37	2	52.9	50.8	87	2	4	8	7	7	11	8	11	2	25	+10.96	3.96	+1.59	1.16	7	Thunder & Lightning, 26th.		
OCTOBER,	30.102	*76	4	58.4	26	25	45.9	*52.2	+6.0	4	50.	48.5	90	2	7	13	11	5	9	3	3	9	14	-1.56	2.33	-0.63	.6	19	Aurora, 7-8 p.m., 31st.		
NOVEMBER,	29.902	55	24	48.8	27	10	37.8	43.2	+1.73	6	42.7	40.9	86	2	6	2	1	6	16	9	8	10	19	+4.22	2.40	-0.47	.63	25	—		
DECEMBER,	29.766	53	22	44.3	18	28	32.6	38.5	+1.0	12	38.	36.5	87	2	7	9	4	9	13	4	6	8	17	+0.79	2.08	-0.88	.65	28	Snow, 27th, 29th, 30th.		
TOTALS, 1908	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Averages ,	29.923	—	55.1	—	47.1	47.75	—	—	—	81	—	—	33	59	94	73	50	131	118	65	109	188	—	—	—	—	—	—	—	—	
Highest ,	30.630	83	68.2	39.5	48.8	58.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Lowest ,	28.608	62	41.	8.5	31.9	36.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Difference from 26 years Average 1883-1908	+	.045	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

* Temperatures thus marked are also extremes for the period 1883-1908





P.



CITY OF PERTH.



Perthshire Natural History
Museum.



REPORT, 1909-1910.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET

1910.

MUSEUM REGULATIONS.



The Museum is open daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY and SATURDAY, 6 to 8 p.m.



ADMISSION FREE.



CITY OF PERTH.



Perthshire Natural History
Museum.



Report of the Museum Committee

TO

The Town Council,

FOR THE YEAR ENDING 15th MAY, 1910.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET

1910.

MUSEUM COMMITTEE.



Councillor WALLACE, *Chairman.*

Lord Provost MACNAB.
Bailie HAMILTON.
„ CROMBIE.
Treasurer ROLLO.
Councillor CAMPBELL.
„ CLARK.

Councillor GRIEVE.
„ HARDIE.
„ LESLIE.
„ MACFARLANE.
„ MACPHERSON.
„ MILLER.

Councillor YOUNG.

*Advisory Committee from the Perthshire Society
of Natural Science.*

Mr. WILLIAM BARCLAY.
„ A. W. BROWN.
„ G. F. BATES.

Mr. JAMES COATES.
„ S. T. ELLISON.
„ JAMES MORISON.

From the Perth County Council.

Mr. W. T. J. S. STEUART FOTHERINGHAM.

From Perth School Board.

Mr. D. THOMSON.

JOHN BEGG, *Town Clerk.* ALEX. M. RODGER, *Curator.*

W. SCRIMGEOUR, *Janitor.*

Perthshire Natural History Museum.

Report for the Year ending 15th May, 1910.

*To the Hon. the Lord Provost, Magistrates and Town
Council of Perth.*

GENTLEMEN,

The Committee of the Perthshire Natural History Museum has pleasure in submitting the Eighth Annual Report, being the Twenty-seventh year and Report of the Museum.

In November last the Town Council appointed the Property Committee to take charge of the management of the Museum, along with the representatives appointed by the Perthshire Society of Natural Science, Perth School Board and the Perth County Council as an Advisory Committee. The number of Committee is thus increased by five members.

The fabric throughout is in good repair ; a concrete gutter was laid between the west wall of the Museum and the adjoining wall to carry off rain, water lodging between the walls being liable to produce damp in Autumn.

The cases on the ground floor of the local Museum were overhauled, cleaned, and the cases painted a dark bronze green, a departure from and improvement on the former french grey colour.

A further extension was made to the series of cabinets under the gallery rail cases, thus making eight in all.

During the year numerous applications were received from Schools in the City and County for assistance in Nature Study, and 146 specimens were borrowed. In this connection it is pleasing to note that the Museum was utilized to a greater extent than hitherto by the public desiring information in various branches of Natural Science.

A number of special visits were made to the Museum by teachers along with classes, Field Clubs, Natural History Societies from various towns, as well as by the Students of Botany and Natural History attending University College and the Technical College, Dundee. To all of these every facility was given to make their visit profitable.

Dr. Enander (Sweden) spent several days in the Museum examining the extensive collections of Willows collected by the late Dr. F. B. White.

Several artists were given special facilities in their studies on Salmon, Trout, Deer and a number of birds.

The Museum is indebted to the Department of Botany of the British Museum, and to the Directors of Kew Gardens for their courtesy in naming several fungi; to Mr. W. W. Roebuck for naming several Perthshire Mollusca, a large series having been sent to him by request. To the Rev. James Waterston, also, for identifying a small collection of Parasites taken on local animals. For an account of these, see current part of the Perthshire Society of Natural Science Transactions.

The Committee is again indebted to Mr. David Campbell and a few members of the Society for undertaking the work of collecting, changing and labelling, from week to week in Summer, the exhibition of named wild flowers. Some 280 plants were shown in the Lecture-room. The exhibits were much appreciated.

As in former years trout were hatched in the laboratory last winter, and were a source of much interest. A collection of living fresh-water animals and plants was kept all year in the Lecture-room, and in early spring the accessions necessitated the addition of two more aquaria. This work has been taken charge of by Master Fred Smith, and gives a great amount of pleasure to young folks.

Sixty-five meetings were held in the buildings. The second year course in Horticulture conducted by Mr. Berry of the Edinburgh and East of Scotland College of Agriculture, taxed the Lecture-room to its capacity on several occasions.

The Perthshire Society of Natural Science continues to encourage the young in Nature Study by means of the essay competition instituted thirteen years ago. Last year 71 essays were sent in on "Perthshire Birds," 37 essays were from City and 34 from County Schools. The essay this year is on "Perthshire Mammals."

Weather observations continue to be recorded daily at 9 a.m. and 9 p.m. A chart showing the morning observations is placed in the window, along with the daily weather forecast of the Meteorological Office. Returns were forwarded each week to the Registrar General, full monthly reports to the Scottish Meteorological Society, to other bodies engaged in Meteorological Work, to the Manager of the Water Works, and to the local press. An abstract for the year 1909 appears at the end of this report.

The Committee is indebted to the local papers for their courtesy in publishing occasional notes on exhibits and donations to the Museum.

The number of visitors to the Museum for the year was 13,839, making a total of 243,830 since the opening. The annual average over the last ten years is 15,543.

The Perthshire or Local Museum.

The specimens added to this collection during the year are indicated by an (*) in the list of additions on page 7.

The exhibits and all glass in the mammal cases have been cleaned, the bases of the cases painted, the doors and steps attended to. No additions of importance were made.

The bird cases have also been cleaned and painted. The most important additions are the adult female Greenland Falcon taken on Schiehallion, and the Puffin at Killiecrankie.

The nest cases were likewise cleaned, painted, and rearranged to admit the nests of the Great Spotted Wood-pecker and the Osprey, two most valuable acquisitions.

The fish, reptile and amphibian cases were cleaned and painted.

In the gallery a number of accessions were made to the Mollusca cabinet; these include examples of *Helix aspersa* and *Hyalina lucida*, taken for the first time in the area of Mid Perth, and *Paludestrina jenkinsi*, not previously recorded in the County.

To the insect cabinets seven species of Beetles (coleoptera) new to the local collection were added by Mr. W. E. Sharp, while the important collection of flies (Diptera), presented by Mr. A. E. J. Carter, contains 58 species also new to the Museum collection. For an account of these two collections of insects, and for a note on the water spider *Argyroneta aquatica*, new to the County, see current issue of the Transactions of the Perthshire Society of Natural Science.

The Index or Type Museum.

Cases No. 33 to 38 were gone over and cleaned. The contents of No. 47 to 54 were removed to make way for a temporary exhibit of arctic maps, works, and portraits of explorers. These have now been replaced.

The collection of British land and fresh-water shells has been removed from the old cabinet, rearranged, labelled and mounted in permanent form. A collection of East Indian shells is in process of similar treatment.

A number of new acquisitions, Mammoth Tusk, Kestrel, Skylark, Chamaeleon, Tarpon, and life history of Stickle-back, have been mounted and placed on exhibition.

ADDITIONS TO THE MUSEUM.



* *Collected in Perthshire.*

MAMMALS—

- * Common Shrew—Mr. John H. Middleton.
- * Water Shrew—Mr. R. Emslie.
- Mammoth Tusk
- Section of Indian Elephant Tusk
- Section of East African Elephant Tusk } Mr. D. Humble.

BIRDS—

- * Puffin—Mr. T. M'Glashan, M.A.
- * Swift—Mr. D. Galletly.
- * Great Spotted Woodpecker's Nest—Mr. W. Steuart Fotheringham.
- * Goldfinch—Mr. T. Marshall.
- * Coot—Mr. B. Valentine.
- * Guillemot—Mr. P. D. Malloch.
- * Crossbill, Male and Female—Mr. J. Gold.
- * Greenland Falcon (Female)—Purchased.

FISHES—

- Tarpon—Mrs. F. Norie Miller.
- Trout Ova—Mr. J. Thomson.

INVERTEBRATES—

- * Mollusca, 3 species (varieties)—Mr. F. Smith.
- * " 14 species (2 new localities)—Mr. J. Leslie.
- * " Paludestrina jenkinsi (new)—Mr. W. Barclay.
- " 93 species, marine—Mr. C. Masterson.
- " 9 species, marine, used in manufacture of pearl buttons—Mr. B. Humble.
- Silver fish *Lepisma saccharina*—Mr. J. Craigie.
- * Water Spider, *Argyroneta aquatica* (new)—Mr. A. M. Rodger.
- * Beetles, 17 species (8 new)—Mr. W. E. Sharp.
- * Parasites from Wild Cat, Badger, Red Deer, Roe Deer, Sheep, Swallow, Guillemot, Barn Owl, Capercaillie—Mr. G. Hart.

INVERTEBRATES—*continued*—

- Parasites, Red Deer, Sheep—Mr. T. Crawford.
 „ Queen Bee—Mr. J. Hutchison.
 „ Hooper Swan, Canada Goose—Mr. A. M. Rodger.
 * Flies (Diptera) 79 species (58 new to collection)—
 Mr. A. E. J. Carter.
 Microscope Slides, 100 Animal Morphology—Mrs. Harker, per Mr. J. Morison.

BOTANY—

- * *Chaerophyllum aureum*—Mr. J. Fraser.
 * Fruits, 30 species—Mr. A. Gray.
 * Fungi, *Boletus impoletus*—Mr. C. M'Intosh.
 „ *Geaster rufescens*—Mr. R. Dow.
 „ *Xylaria polymorpha*—Mr. J. Menzies
 „ *Polyporus squamosus* (antler-like form)—
 Mr. A. Dunn.
Encephalartos sp., female cone—Mr. R. Dow.

GEOLOGY—

- * Basalt, Quartz porphyry—Mr. G. F. Bates, B.A., B.Sc.
 * Epidiorite, talcose and chloritic conditions; also photograph of the quarry, Felsite—Mr. A. M. Rodger.
 * Asbestos—Mr. G. Anderson.
 Fossil Plants, Greenland—Capt. Adams.
 Molybdenite, N. America—Capt. Adams.
 Panoramic view of Grampians, in six views from Chriagaich—Mr. A. M. Rodger.
 * Stone implement, hand hammer—purchased.



ABSTRACT OF METEOROLOGICAL OBSERVATIONS, PERTH, 1909.

Averages are for the period 1883-1908.

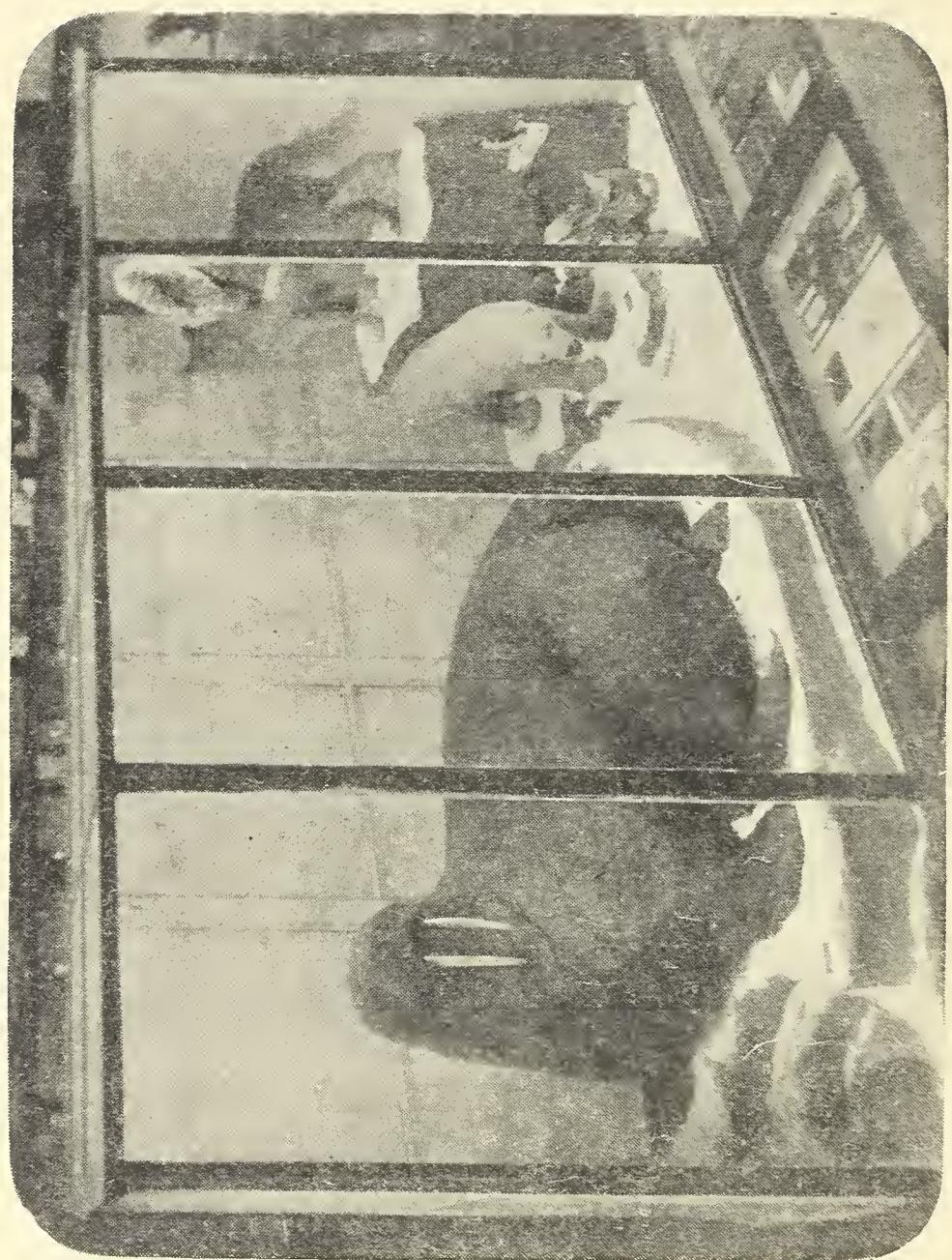
Height of Station above Sea Level = 85 feet.

ALEX. M. RODGER, Curator, Museum, Perth.

PRESENTED
21 JUN. 1910



ARCTIC CASE—MUSEUM.





CITY OF PERTH.



Perthshire Natural History
Museum.



REPORT, 1910-11.



Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

—
1911.

MUSEUM REGULATIONS.

The Museum is open daily—

9 a.m. to 4 p.m.

TUESDAY, 9 a.m. to 1 p.m.

Evenings of MONDAY, WEDNESDAY, SATURDAY, 6 to 8 p.m.

ADMISSION FREE.



CITY OF PERTH.

Perthshire Natural History Museum.

Report of the Museum Committee
to the Town Council,

For the Year ending 15th May, 1911.

Perth:

PRINTED BY D. LESLIE, 20 ST. JOHN STREET.

1911.

MUSEUM COMMITTEE.

Lord Provost MACNAB.

Bailie HAMILTON.

,, CROMBIE.

Treasurer ROLLO.

Councillor BEATON.

,, CAMPBELL.

,, CLARK.

Councillor GRIEVE.

,, HARDIE.

,, LAWRIE.

,, MACFARLANE.

,, MACPHERSON.

,, MILLER.

Ex-Dean of Guild WOTHERSPOON, *Chairman.*.

*Advisory Committee from the Perthshire Society of
Natural Science.*

Mr. WILLIAM BARCLAY.

Mr. A. W. BROWN.

Mr. G. F. BATES.

Mr. JAMES COATES.

Mr. S. T. ELLISON.

Mr. JAMES MORISON.

From the Perth County Council.

Mr. W. T. J. S. STEUART-FOTHERINGHAM.

From Perth School Board.

Rev. DEAN LAVELLE.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

W. SCRIMGEOUR, *Janitor.*



PERTHSHIRE

NATURAL HISTORY MUSEUM,

PERTH.

ALEX. M. RODGER,
CURATOR.

With the Curator's Compliments.

Perthshire Natural History Museum.

Report for the Year ending 15th May, 1911.

*To the Hon. the Lord Provost, Magistrates and
Town Council of Perth.*

GENTLEMEN,

The Committee of the Perthshire Natural History Museum has pleasure in submitting the Ninth Annual Report, being the twenty-eighth year and report on the Museum.

The fabric throughout is in good repair.

In autumn, under the supervision of Mr. M'Laren, Depute Burgh Surveyor, doors, windows and iron work were attended to and painted ; the brick walls in the rear of the building were coated with duresco.

The ninth cabinet under the gallery rail was added, the trays for this giving 64 sq. ft. of accommodation for storage of local reference material. New bolts were fitted to all doors of the cabinets under the east and north wall cases ; the former were also fitted with new 1-inch runners. Eighteen glass-topped drawers, yielding 42 sq. ft., were added to the local insect cabinets.

The exhibition of wild flowers was continued last summer under the charge of Mr. David Campbell, with assistance from other members of the Society. The Lecture table was used for the display of flowers collected within the area from week to week, and in all upwards of 300 species were shown. The common and technical name, the locality, and other information were given on cards attached to the plants. The exhibit was most successful and much appreciated.

In this connection the Committee deplores the loss of Miss Thomas, who died in France last August. No later than July she took a share in the above work, and until three years ago this was a branch of Museum work she began and carried on each year with enthusiasm.

Sixty meetings were held in the buildings, including a short course of lectures by Mr. Steele, of the Edinburgh and East of Scotland College of Agriculture, on Bee-keeping. Between 30 and 40 persons interested in the management of bees took advantage of the course.

During the year many applications were received for information in various branches of natural history; in no previous year were these so numerous. Teachers engaged in Nature study borrowed 169 specimens for school work; Students in Art, Artists and others were given every facility in the prosecution of their work in the Museum.

During the winter eggs of trout and sea trout were kept for observation; in spring those of the toad were on view. The hatching out and development of these, as well as the living fresh water animals on view in a number of small aquaria in the Lecture Room, were a source of much interest.

It is pleasing to note that the Perthshire Society of Natural Science continues the work of encouraging school boys and girls in the City and County to take up the study of nature, and in response to their circular 66 essays were sent in on "Perthshire Mammals." The Hon. the Lord Provost, in presenting the prizes, gave a most thoughtful address on "Hobbies" to the young folk. The subject of the essay for the present year is "Birds and their Nesting Habits."

Thanks are due to the Director of the British Museum, the Director of Kew Gardens, the Secretary of the Board of Agriculture, Rev. James Waterson and Mr. A. E. J. Carter for their courtesy in naming critical material.

Weather observations were taken daily at 9 a.m. and 9 p.m. The morning readings were available to the public by means of a chart placed in the window, alongside of the daily forecast of the Meteorological Office.

Returns were made each week to the Registrar General; complete monthly returns to the Scottish Meteorological Society; reports were also sent to other bodies engaged in meteorological work, as well as to the Water Works and to the local press. An abstract for the year 1910 appears at the end of this report.

Thanks are due to the local press for their courtesy in publishing occasional notes of donations and exhibits.

The number of visitors to the Museum for the year was 12,462, making a total of 256,290 since the opening.

The Perthshire or Local Museum.

The specimens added to this collection during the year are indicated by an * in the list of additions on page 7. Several of these are important. That of the common bat is a dark variety and is the second example in the Museum of this departure from the normal colour. The otter has been mounted to show the teeth. The common hare from Capt. H. Drummond Moray was shot by Mr. Anderson near Auchterarder. It is tawny coloured throughout, the usual dark tips of the ears and tail being absent. The eyes were pink.

A pair of great crested grebes in fine plumage and a series of young sparrow hawks were added to the bird cases.

A number of curious birds' nests were acquired, including one of a blackbird and one of a song thrush built under railway carriages engaged in traffic between Perth and Fife stations.

A most important addition is the warted newt, a rare species in the County, which was hitherto unrepresented in the Museum.

The slug, *Testacella haliotidea*, is a rare species in this locality, and though known, no examples were in our collections.

A considerable amount of time was devoted to working through the Perthshire insect groups. Additions to the Bees, etc. (Hymenoptera), cabinets received in recent years made it necessary to increase the number of drawers in this series. Four wasp's nests were mounted and placed in the exhibition case; one of these, *Vespa vulgaris*, measures 24 in. x 12 in. x 7 in.

The cabinets containing the flies (Diptera) were also extended to accommodate the recent additions from Mr. Carter and Mr. Wylie.

The dragonflies (Odonata) had a number of additions incorporated, making it necessary to increase the space for the group. The local and British collection of this series was investigated by Mr. W. Evans in connection with his recent paper on their distribution in Scotland.

The beetles (Coleoptera) from Mr. W. E. Sharp contained no less than 19 species new to the collections. The specimen received per Mr. M'Glashan was also up till now unrepresented.

The Herbarium is receiving attention, all the fascicles of the flora of the County have been placed in strong cardboard boxes of special design, and replaced in the cupboards, the intention being to prevent dust getting access to this very valuable collection ; 120 boxes have so far been used. A number of rare additions were made to the collections, but for an account of these see Transactions of the Perthshire Society of Natural Science for 1910-11.

The Fungi (Pyrenomycetes) from Mr. Charles M'Intosh and the (Discomycetes) from Mr. James Menzies are the product of years of patient labour and are very important additions. The group was formerly almost unrepresented.

A beginning has been made to the overhauling and cleaning of the exhibition cases of local rocks. New labels, illustrations, and a finer choice of specimens will be worked into the series.

Index or Type Museum.

From this museum the sea leopard was loaned to Dr. Bruce for his Antarctic exhibit at the Scottish National Exhibition in Glasgow. The only additions of any importance were the Baikal teal (shot in Perthshire), and a series of young Arctic terns to the bird cases.

The shell collections were extended by the addition of recent acquisitions, and arranged in glass-topped boxes, while a further extension will be necessary to incorporate the 500 specimens received this year from the Viscountess Strathallan.

ARCHIBALD U. WOTHERSPOON,

Chairman of Committee.

ALEX. M. RODGER,

Curator.



ADDITIONS TO THE MUSEUM.

* *Additions to the Perthshire Collections.*

MAMMALS—

- * Bat, Common, male, dark variety—Mr. R. Marshall.
- * Otter, female—pur.
- * Water Vole, male, black variety—Mr. P. Dow.
- * Hare, Common, female, tawny variety—Capt. H. Drummond Moray.
- Elephas primigenius, molar tooth—Mr. T. Midgley.

BIRDS—

- * Song Thrush, 2 nests built together—Mr. R. Dow.
- * Song Thrush, nest built on railway carriage brake—Mr. F. H. Ind.
- * Blackbird, nest built in railway carriage spring—Mr. F. H. Ind.
- * Song Thrush—Miss Hanchett.
- * Robin, male—Mr. A. M. Rodger.
- * Tawny Owl, chick—Mr. Wm. White.
- * Little Grebe, male—Mr. A. Smeaton.
- * Great Crested Grebe, male and female—pur.
- Taylor Bird, nest—Mr. Wm. Ellison.
- Birds and Nests, 40 photographs—Mr. A. Davidson.
- Baikal Teal, *Nettion formosum*, male, shot in county—Mr. Atholl MacGregor.
- * Golden Plover, female—Master John Ross.

REPTILES AND AMPHIBIANS—

- Crocodile, Egg—Mr. Robertson.
- * Warted Newt, female—Mr. Lawrence Pullar, per Mr. Davie.

INVERTEBRATES—

- Marine Shells, about 500 Specimens, chiefly Indian Ocean—Viscountess Strathallan.
- * Testacella haliotidea—Mr. Davie.
- * Vertigo minutissima—Mr. F. Smith.

INVERTEBRATES—*continued.*

- *Flies (Diptera), 47 Species (130 Specimens), 9 Species new to collection.—Mr. W. Wylie.
- *Beetles (Coleoptera), 23 Species—Mr. W. Sharp.
- *Beetle, *Trichius fasciatus*—Mrs. M'Intosh, per Mr. M'Glashan.
- *Mosquito, *Culex fatigans*, mounted for the Microscope—Dr. W. T. Graham.
- *Hydrachnids, 3 Species—Messrs. Rodger and Smith.
Stick Insect, Chile—Miss Rodger.
- *Moths, 24 Species—Mr. W. Wylie.
- *Parasites from Raven, Tawny Owl, Eagle, Gannet, Pheasant, Sheep—Mr. G. Hart.

BOTANY—

- **Linnæa borealis*—Lord Medway.
- **Saxifraga rivularis*—Mr. Haggart.
- **Juncus tenuis*—Mr. Haggart.
Microscope Slides, 115—Mr. John Thomas.
- *Fungi, 63 Specimens, Discomycetes—Mr. James Menzies.
- *Fungi, 177 Specimens, Pyrenomycetes—Mr. Chas. M'Intosh.
- *Fungus, *Volvaria bombycina*—Mr. Chas. M'Intosh.

GEOLOGY—

- Minerals, 44 Specimens, Australia—Mr. W. G. Mowat.
- *Asbestos—Mr. A. M. Rodger.
Labradorite, Granite, Sweden—Mr. Cooper.
- Sandstone, Keithick Quarry—Mr. Cooper.
- Sandstone, Leoch Quarry—Mr. Brand.
- *Quartz Schist, showing foliation—Mr. A. J. D. Ferguson.
- *Hornblende Schist, from “Green beds,” Garnetiferous Hornblende Schist, Diorite-porphyrite, Quartz-porphyrone, 4 Geological photographs—Mr. G. F. Bates.
- *Foliated Granite—Messrs. Bates and Rodger.
- *Foliated Schist (Photo)—Mr. Evan Macgregor.
- *Hornblende Schist, Epidote Amphibolite, Epidiorite, Gabbro, Basalt, Andesite, Quartz Mica Schist, Quartzite, Limestone, Slate—Mr. A. M. Rodger.

PRESENTED

16 JULY 1911



ABSTRACT OF METEOROLOGICAL OBSERVATIONS, PERTH, 1910.

BARO-METER	AIR TEMPERATURE.	HYGROMETER.										RAIN.										WIND DIRECTIONS.										REMARKS.		
		Absolute Maximum and Minimum.		Mean of A and B at 9 a.m. and 9 p.m.		Mean of C and D at Sea Level and 32° Fahr.		Mean of E and F at 9 a.m. and 9 p.m.		Mean at 9 a.m. and 9 p.m.		Number of Days		Difference from the Average.		Total Fall.		Difference from the Average.		Number of Days		Difference from the Average.		Total Fall.		Difference from the Average.		Number of Days		Number of Observations at 9 a.m. and 9 p.m.		Remarks.		
JAN.	29.626	41.8	29.1	35.5	-1.6	54	2	-3	28	17	35.3	1.9	82	15	+0.7	2.92	+0.35	0.61	8	7	6	1	0	4	23	10	6	5	5	Thun. & Light. 8th, Snow 10th, 23, 25, 26, Concrete 21, Tay frozen 28, ice at Victoria Bridge, Pento. -3°. Snow 7, 15, 22, 23, 24, Tay in Spade 9' ft. on 20th.				
FEB.	29.379	44.4	32.5	38.5	+1.2	52	1.9	18	9	20	36.7	1.7	85	21	+8.7	2.22	+0.03	0.44	16	4	6	6	7	7	13	5	4	4	4	Snow 17, Tay in Spate 2nd & 3rd, 10' on 3rd.				
MAR.	30.048	50.9	35.9	43.4	+3.7	59	23.28,	27	28,29	11	41.5	2.4	82	9	-5.0	1.49	-0.90	0.50	1	3	3	5	5	4	23	6	10	3	3	Snow 17, Hail 23, 28.				
APR.	29.745	51.1	36.0	43.6	-0.6	61	30	27	8	14	42.4	3.0	78	17	+5.5	3.83	+2.05	1.70	16	10	6	3	5	0	14	11	8	3	3					
MAY	29.875	60.3	42.1	51.2	+1.7	74	15.22	29	9	7	49.7	3.4	77	12	-1.3	1.08	-0.92	0.22	12	2	10	9	6	2	19	5	5	5	4	Hail 4, 5, Thun. 13, T. & L. 21, Cornerake 13, Cuckoo, Swifts 23, Hail 22.				
JUNE	29.891	66.5	45.4	56.0	+0.3	79	12	35	6	1	55.1	3.8	76	10	-1.0	1.27	-0.72	0.31	28	6	13	12	4	0	6	13	4	2	2	Thun. & Light. 21, Thun. 22, 23.				
JULY	29.836	65.7	48.8	57.3	-0.9	79	13	40	16	0	56.1	1.9	87	17	+2.4	4.66	+1.71	1.47	25	1	9	14	7	2	13	4	12	0	0	Thun. 2, 29, 30, Thun. & Light. 31.				
AUG.	29.771	66.1	51.9	59.2	+2.2	75	12	44	23	0	57.0	1.9	88	23	+6.8	6.80	+3.31	1.0	28	3	4	13	13	4	0	6	13	4	2	2	Thun. & Light. 4, Swifts last seen 13, Tay in Spate 26, 29, 13' on 29th.			
SEPT.	30.207	64.0	45.5	54.8	+1.5	73	4	37	20	0	52.5	2.5	83	9	-5.0	0.76	-1.61	0.70	18	3	4	15	5	4	10	10	7	2	2	Trees, Tay Street, heavy fall leaves 20th.				
OCT.	30.057	56.4	42.0	49.2	+3.0	70	6	32	13.20	3	47.8	1.4	90	13	-2.6	2.26	-0.70	0.24	28	6	10	13	4	3	8	10	5	3	3	Fine Autumn tints on trees Kinnoull on last week, Trees stripped on 31st.				
NOV.	29.585	41.9	29.3	35.6	-5.9	48	1, 4, 5	17	23	21	33.7	1.9	80	11	-4.6	3.26	+0.39	0.72	13	11	4	8	2	0	3	11	17	4	4	4	Street 6, 12, Aurora 29.			
DEC.	29.575	46.8	37.2	42.0	+4.5	55	23	22	28	7	42.0	2.2	84	22	+5.7	2.62	-0.34	0.45	8	4	4	13	9	5	10	8	7	7	2	2	St. fall snow 28.			
YEAR	29.799	54.6	39.6	47.1	+0.7	79	33.17	..	101	179	+10.3	170			
Highest	30.744	9 a.m.	14th	Oct.																														
Lowest	28.392	9 p.m.	20th	Feb.																														

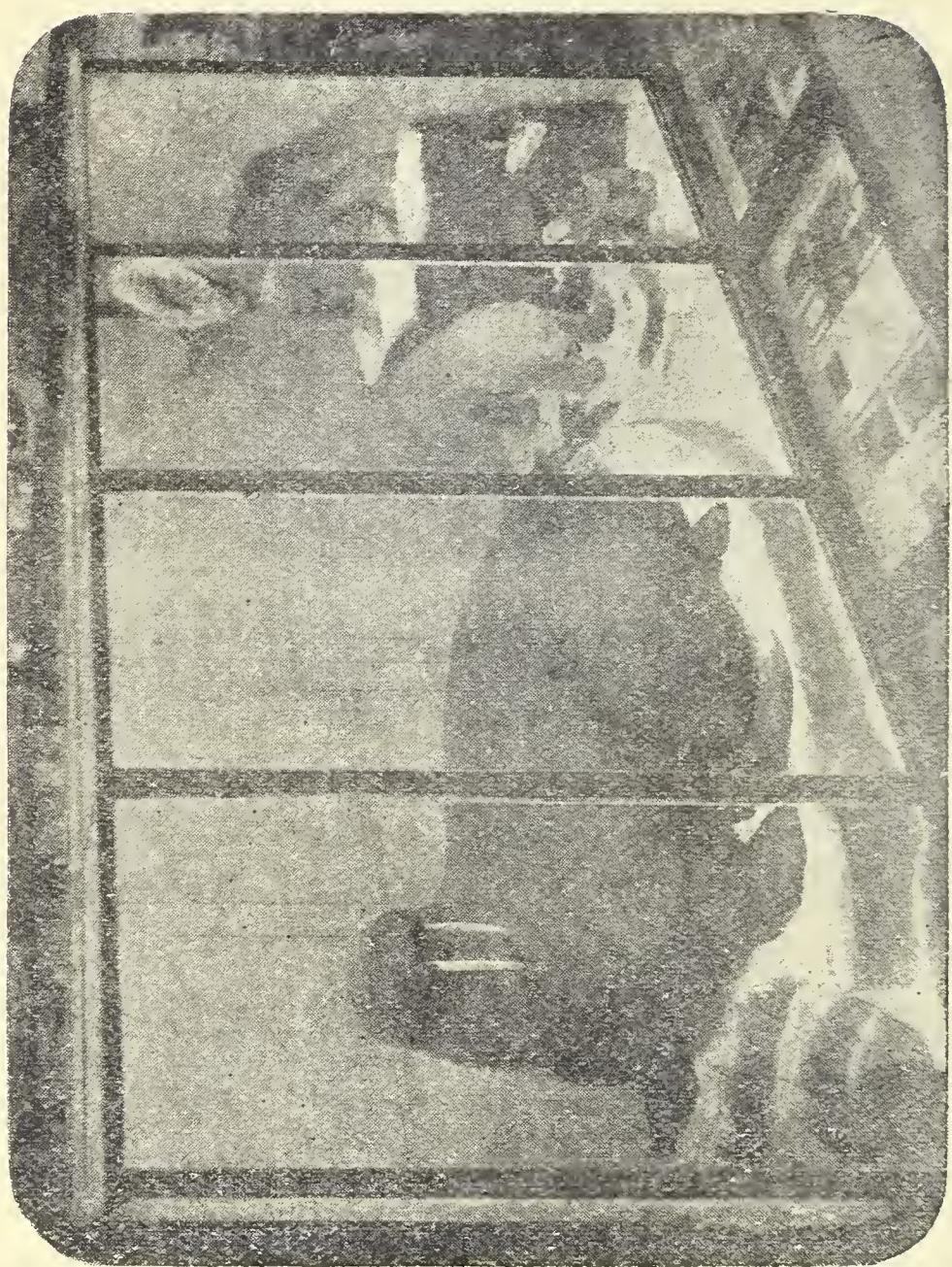
Averages are for the period 1883-1908.

Height of Station above Sea Level = 85 feet.

ALEX. M. RODGER, Curator, Museum, Perth.



ARCTIC CASE—MUSEUM,





CITY OF PERTH.

Perthshire Natural History Museum.

REPORT, 1911-12.



Perth:

PRINTED BY MILNE, TANNAHILL, & METHVEN,
12-14 MILL STREET.

MUSEUM REGULATIONS.

The Museum is open daily :—

9 a.m. to 4 p.m.

Tuesday, 9 a.m. to 1 p.m.

Evenings of Monday, Wednesday, and Saturday, 6 to 8.

ADMISSION FREE.



CITY OF PERTH

Perthshire Natural History Museum

REPORT of the Museum Committee to the Town Council
for the Year ending 15th May, 1912,



MUSEUM COMMITTEE.

Lord Provost MACNAB.	Councillor HARDIE.
Bailie CROMBIE.	Councillor M'CRACKEN.
Bailie CAMPBELL.	Councillor M'FARLANE.
Councillor ALLAN.	Councillor MILLER.
Councillor BEATON.	Councillor WOTHERSPOON.
Councillor CLARK.	Councillor YOUNG.
Councillor HAMILTON.	

Ex-Dean of Guild WOTHERSPOON, Chairman.

ADVISORY COMMITTEE.

From the Perthshire Society of Natural Science.

Mr. WILLIAM BARCLAY.	Mr. JAMES COATES.
Mr. A. W. BROWN.	Mr. S. T. ELLISON.
Mr. G. F. BATES.	Mr. JAMES MORISON.

From the Perth County Council.

Mr. W. T. J. S. STEUART FOTHERINGHAM.

From the Perth School Board.

Very Rev. Canon LAVELLE.

JOHN BEGG, *Town Clerk.*

ALEX. M. RODGER, *Curator.*

W. SCRIMGEOUR, *Janitor.*

Perthshire Natural History Museum.

REPORT FOR THE YEAR ENDING 15th MAY, 1912.

*To the Hon. the Lord Provost, Magistrates, and Town Council
of Perth.*

GENTLEMEN,

Your Committee in charge of the Perthshire Natural History Museum has pleasure in submitting the Tenth Annual Report, this being the twenty-ninth report since the Museum was opened.

The fabric throughout is in good repair.

The tenth and final cabinet, under the gallery rail, was added this year, and the two corners at the pillars were panelled and rounded off. The series now presents a continuous whole round the gallery, and is in keeping with the exhibition table-cases. The amount of storage space for reference material has thus been considerably increased.

During June and July the Lecture Room was used for a display of wild flowers, the exhibition of which, from week to week, was very much appreciated. Over 350 exhibits were shown, and in each case cards accompanied the specimens giving the name, habitat, and other information. To Mr. D. Campbell, who undertook most of the collecting, and to the other members of the Society who rendered occasional help, the Committee tender their thanks.

The hatching and development of trout at New Year time, and frogs in spring, is every year popular. If space in the Museum permitted, this instructive way of exhibiting animals might, with great acceptance, be extended, so as to enable the keeping of living animals in aquaria throughout the year. Wherever this has been done it has been found extremely popular with young folks; of the instructive value there can be no question, since it presents facts about animals that only the living forms can show.

Sixty-nine meetings were held in the buildings, the lecture-room at some of these meetings being more than comfortably filled. The installation of the electric light and fan, now in process, should have a most beneficial effect throughout the building by maintaining a more uniform temperature. The convenience in lighting will also be much appreciated.

As in former years many applications were received for information in various branches of Natural History, and every encouragement is given in this direction. Teachers requiring material in Nature Study borrowed 152 specimens. More might be done in this way if the course of lessons was known beforehand. Special facilities were given to several Art Students and Artists requiring the use of specimens.

The Essay Competition on "Birds and their Nesting Habits," set by the Perthshire Society of Natural Science, resulted in 60 essays from the City and County Schools. The Essay set for the present year is "A Perthshire River."

A number of members of the International Phytogeographical Excursion in the British Isles honoured us with a visit on the 15th August, while on their way from Edinburgh to Atholl. The chief object of their visit to the Museum was the examination of the Perthshire Alpine Plants contained in the herbarium.

The Herbarium was consulted by several students engaged in plant distribution, and the type collection of Perthshire Willows formed by the late Dr. F. Buchanan White was in part examined by the Rev. E. F. Linton.

The Committee desire to thank all donors and others who have in any way assisted in forwarding the work of the Museum ; also thanks are due to the Director of the Royal Gardens, Kew, for naming a number of critical Microfungi ; to the Rev. James Waterston for working out the series of bird and mammal ecto-parasites collected by Mr. G. Hart and others ; to Mr. A. E. J. Carter for identifying a series of Perthshire Diptera, made by Mr. W. Wylie ; and to Mr. R. H. Meldrum for a further collection of Perthshire Mosses ; to Lord Dean of Guild Henderson and Mr. R. Mitchell for allowing the Curator to examine, measure, and weigh a series of mountain hares ; and to Mr. J. H. Buchan for material.

The collection of birds from Captain W. S. H. Drummond Moray is from the private Museum at Blair-Drummond, lately dispersed. It was formed in the first instance by George Stirling Home-Drummond, M.A., 8th Laird of Blairdrummond and 10th of Ardoch, 1813 to 1876, who interested himself in various departments of natural history, antiquities, etc.

Observations on the weather were made daily at 9 a.m. and 9 p.m. The morning readings were available to the general public by means of a chart placed in the window alongside of the British Meteorological Forecast for the day. Returns were sent each week to the office of the Registrar General ; to the local press ; monthly returns to the Scottish Meteorological Society ; to Dr. H. R. Mill, British Rainfall ; to the Manager of the Perth Waterworks. An abstract for the year 1911 appears at the end of this Report.

Thanks are due to the members of the local press for their courtesy in publishing occasional notes on donations and exhibits.

The number of visitors to the Museum for the year 1912 was 11,411, making a total of 267,701 since the opening.

Perthshire or Local Museum.

The specimens added to this collection during the year are indicated by an * in the list of additions on page 6.

The gallery cases, Nos. 32 to 40 inclusive, were cleaned, and the contents overhauled. Some additions were made to the contents, and a number of specimens were replaced by better representatives from the reference cabinets. All labels were renewed. Some 330 specimen labels and 23 large direction and explanatory labels were printed for the cases, 9 Geological Coloured Maps of the County (10 m. to the inch), were framed and placed at the base of each case, and the occurrence in the County of the rocks in each case is further emphasised by outlining the area on the glass covering the maps. Some further additions were made to the illustrations—rock views, etc.

The three mountain hares from Mr. Atholl Macgregor, showing phases in autumn change of fur, were mounted in excellent attitudes. Specimens in spring conditions were received from Mr. J. Macfarlane, and a young animal from Mr. A. J. Ross. These specimens will be placed in the mammal case in due course.

INDEX OR TYPE MUSEUM.

The cases in this Museum, 94 in number, were cleaned, the specimens examined, and where necessary the spirit was changed.

The table case, Nos. 87-94, at the north end was emptied preparatory to the cabinetmaker reducing the height and increasing its width to correspond with that at the south end of the museum.

The Sea Leopard was returned from the Scottish National Exhibition, where it figured in the Antarctic group prepared by Dr. Bruce.

The east window blinds at the south end of the museum were renewed.

ARCHIBALD U. WOTHERSPOON,
Chairman of Committee.

ALEX. M. RODGER,
Curator.

ADDITIONS TO THE MUSEUM.

* PERTHSHIRE MUSEUM.

Mammals.—

- * FOX, male—Capt. The Hon. M. A. C. Drummond.
- OX, portion of skull dug up at Craigie—Mr. J. Valentine.
- BISON, skull minus lower jaw—Mr. J. Smail.
- * MOUNTAIN HARE—male, female, Autumn fur—Mr. Atholl Macgregor.
- * MOUNTAIN HARE—male, young, Spring fur—Mr. A. J. Ross.
- * MOUNTAIN HARE—female, late Spring—Mr. J. Macfarlane.

Birds.—

- * FIELDFARE, female—Mr. Atholl Macgregor.
- * TREE PIPET, female—Mr. R. Gloag.
- * ROOK, female—Mr. H. S. Pullar.
- * JACKDAW, female—Mr. A. Gray.
- * MERLIN, female—Mrs. T. Winton.
- * HERON, male—Mrs. J. Gordon.
- * GROUSE, male, female—Mr. Atholl Macgregor.
- * CORNCRAKE, male—“ ” “ ”
- * KITE, male, female ; HEN HARRIER, male ; HOBBY, female ; KESTREL, male ; MARSH HARRIER, female ; * BARN OWL, SCOPS OWL ; GREEN WOODPECKER, male, female ; SPARROW (white) ; RED-BACKED SHRIKE, male, female ; YELLOW WAGTAIL, male, female ; BEARDED TITMOUSE, male ; HAWFINCH, male, female ; GOLDFINCH, male ; MOUNTAIN FINCH, male ; STONECHAT, male ; GARDEN WARBLER ; SNOW BUNTING ; TREE SPARROW ; CIRL BUNTING, male ; STARLING (1838) ; BLACK GUILLEMOT ; TURTLE DOVE ; PTARMIGAN ; CUCKOO ; RUFF, male, female ; * CRESTED TITMOUSE ; REDSTART, male ; PUFFIN ; MAGPIE (white) ; CHOUGH ; BLACKBIRD (brown) ; GOLDEN ORIOLE ; R. N. PHALEROPE ; STORM PETREL ; STONE CURLEW ; AVOCET ; BIRD OF PARADISE—Capt. W. S. Home-Drummond Moray.

Fishes—

- * PIKE—Mr. R. M. Stewart.
- * SCALES, from male salmon 4 ft. 1 in.—Mr. C. MacIntosh.

Invertebrates.—

- SHELL, *Achatina sp.*, W. Africa—Mr. A. W. Brown.
- * MUSSEL SHELLS, 2 specimens from which valuable pearls were taken—purchased.
- * PEARLS, small collection, white and brown—purchased.
- * ACARI, *Carpoglyphus anonymus*, taken on beer—Mr. A. Gray.
- * PARASITES from Dungbeetle—Mr. A. M. Rodger.
- * PARASITES from Golden Eagle, Magpie, Peacock, Badger—Mr. G. Hart.
- * BEES, 3 specimens *Andrena sp.*—Mr. A. Gray.
- * BEES *Andrena clarkella*, 14 specimens—Mr. A. M. Rodger.
- ICHNEUMONS, 2 specimens—Mr. G. Dow.
- WOODWASPS, *S. juvencus*, larvae, pupa, and wood—Mr. G. Dow.
- WOODWASPS, *S. juvencus*, adult, larvae, pupa—Mr. J. Leslie.
- * WOODWASPS, *S. gigas*—Mrs. F. Robertson.
- * SAWFLIES 6 specimens—Mr. W. Wylie.
- * WASPS and NEST, *Vespa norvegica*, *V. vulgaris*, *V. germanica*, *V. Sylvestris*—Mr. R. G. Thomson.
- * WASPS and NEST, *V. norvegica*—Mr. A. M. Rodger.
- * BEETLE, Cockchafer—Mr. J. Saunders.
- * BEETLES, 2 specimens *Elaphrus cupreus*—Wm. Wylie.
- * BEETLES (a number), *Longitarsus luridus* (new)—Mr. A. Gray.
- WATER BEETLES, 91 species—Mr. W. E. Sharp.
- * DIPTERA, 68 specimens—Mr. Wm. Wylie.
- * LEPIDOPTERA, 8 specimens—Mr. Wm. Wylie.
- * LEPIDOPTERA, a number—Mr. A. E. Pullar.
- * BUGS, *Cimex lectularius*, a number—Mr. Mackay. (Troublesome last summer, in old properties.)
- MICROSCOPE SLIDES, 24—purchased.

Botany.—

- * FUNGI, 32 specimens, Discomycetes—Mr. J. Menzies.
- * FUNGI, 4 specimens, Pyrenomycetes—Mr. C. M'Intosh.
- * MOSESSES, 47 specimens—Mr. R. H. Meldrum.
- * OAK, piece of, "Lizzie" deeply cut on the bark some 25 years ago and healed over. Revealed on cutting up for firewood.—Mr. J. Gibson.

Geology.—

- * SLATE, grey, green and blue varieties of commerce—Mr. J. H. Buchan.
- * JASPER—Mr. R. Lodge,

- * CALC-SERICITE SCHIST, EPIDIORITE, DIORITE, MICA SCHIST, SCHISTOSE GRIT, Slate green and blue—Messrs. Bates and Rodger.
- * PEGMATITE GRANITE, PHOTO-MICROGRAPHS OF FOLIATED GRANITE, EPIDOTE AMPHIBOLITE—Mr. G. F. Bates.
- * SERPENTINE, HORNBLENDE SCHIST, HYDRO MICA SCHIST, PORPHYRITE, LIMESTONE, BASALT, DIORITE, QUARTZ, PORPHYRY and COPPER, ZINC and LEAD ORE, EPIDOTE AMPHIOLITE, MICA SCHIST and RUTILE, CALCAREOUS SERICITE SCHIST, GARNETIFEROUS MICA SCHIST—Mr. A. M. Rodger.
- * PORPHYRITE, amygdoloidal—Mr. H. Coates.
- * BOG OAK, PEAT, BLUE CLAY, from BOULDER CLAY—Messrs. MacLeod and Taylor.
- * PTERYGOTUS ANGLICUS, 7 fragments—Mr. J. B. Carr.
FLINT ARROWHEAD, SCRAPER, FRAGMENT OF POTTERY, BRONZE RIVET, NEEDLE, etc., Scotch—Mr. A. Beattie.
- * FLINT, fragment—Mr. J. Valentine.

Lantern Slides.—

- GEOLOGICAL, 132 slides—purchased.
- VARIOUS, 142 slides—Mr. H. Coates.
- VARIOUS, 41 slides—Major Mercer.
- VARIOUS, 339 slides—Mr. A. M. Rodger.

The Committee desire to tender their thanks to the following gentlemen for the loan of negatives from which it is proposed to make lantern slides :—Messrs. G. F. Bates, H. Coates, J. B. Corr, Major Mercer, J. Winter, and H. P. Morle.



ABSTRACT OF METEOROLOGICAL OBSERVATIONS, PERTH, 1911.

MONTH.	BARO-METR.		AIR TEMPERATURE.		HYGROMETER.		RAIN.		WIND DIRECTION.									REMARKS.																
	Mean at Sea Level at 320 Fath. and 9 a.m., and 9 p.m.		Absolute Maximum and Minimum.		Mean of A and B.		Difference from Average.		Number of Days.		Number of Observations at 9 a.m. and 9 p.m.		Inches.																					
	Mean of A.	Maximum (A).	Minimum (B).	Maximum (B).	Day of Month.	Minimum.	Day of Month.	Difference from Average.	Dry Bulb.	Wet Bulb.	Depression of Barometer.	Humidity.	Total Fall.	the Average.	24 Hours.	in. D.	N	NE	E	SE	S	SW	W	NW	Variable.									
JAN.	30.183	44.3	35.1	39.7	+2.6	53	26	25	4	31	13	39.5	2.3	82	13	-1.3	0.49	-2.08	.13	11	6	4	2	3	28	8	5	3	Bright month.					
FEB.	29.948	49.5	31.6	38.8	+1.5	56	21.22	17	2	15	37.1	2.3	80	15	+2.7	2.03	-0.16	.34	.21	6	6	2	4	2	16	10	8	2	Tay in Spate, 17-19; 22-24.					
MAR.	29.980	46.4	35.3	40.9	+1.2	55	2	28	7	13	39.2	2.5	80	13	-1.0	0.87	-1.52	.17	.18	8	16	9	2	2	9	2	11	3	Dry month.					
APR.	29.927	53.7	37.4	45.6	+1.4	64	13	21	6	10	44.4	3.6	74	13	-1.5	0.90	-0.88	.15	.17	6	5	1	4	1	16	11	11	5	Bright, Snow 17th, Hail 26th					
MAY	29.975	65.0	43.1	45.1	+4.6	75	27.29,	32	6	1	52.4	3.6	77	9	-4.3	0.92	-1.04	.47	.3	1	6	12	7	8	10	11	3	4 Bright, Rain less than half the average.						
JUNE	29.935	66.3	45.3	55.8	+0.1	80	4	32	13.14	1	55.8	4.5	73	8	-2.1	1.56	-0.40	.70	.24	3	2	12	1	2	1.5	10	10	5 Bright, Thunder 1.19, Hail 30						
JULY	30.085	71.9	50.8	61.4	+3.2	90	12	36	3	0	59.5	4.2	75	14	-0.6	1.63	-1.32	.41	.27	2	4	5	8	3	24	10	2	4 90° record. Maximum temperature.						
AUG.	29.945	71.1	51.7	61.4	+4.4	81	9	41	17	0	59.6	3.6	78	13	-3.1	1.31	-2.18	.24	.3	1	5	11	8	8	3	0 Rain about ½ the average.								
SEPT.	29.974	62.9	43.0	53.0	-0.3	71	10	28	22	2	51.5	2.9	81	8	-6.0	1.05	-1.25	.28	.8	7	0	5	4	0	29	8	7	0 Rain half average.						
OCT.	29.929	52.8	36.5	44.7	-1.5	59	11	19	29	7	42.8	2.0	85	14	-1.6	1.92	-1.04	.51	.29	8	16	8	0	2	11	4	8	5 Rain still below average.						
NOV.	29.599	46.3	34.6	40.5	-1.0	54	15	25	10	12	39.3	2.1	84	23	+8.2	3.75	+0.88	.42	.17	11	10	3	2	4	17	4	5	4 Tay out on 30th.						
DEC.	29.501	44.6	34.6	39.6	+2.1	55	18	26	4, 5, 8	14	39.4	1.6	87	24	+7.8	4.02	+1.06	.53	.15	2	4	10	9	9	12	8	0	8 Rain over average.						
YEAR	29.915	47.9	90	...	17	...	88	20.46	-10.04	...	61	78	80	52	44	205	94	73	43				
Highest	30.831	9 p.m.	1st Feb.	
Lowest	28.476	Noon	5th Nov.

Averages are for the period 1883-1908.

Height of Stations above Sea-Level = 85 feet.





RAVEN.

contents



CITY OF PERTH.

PERTHSHIRE NATURAL HISTORY
MUSEUM



REPORT, 1912-13.

PERTH:

PRINTED BY SMART & M'KINLAY, 13-15 KING STREET.

1913.

MUSEUM REGULATIONS.

The Museum is open Daily - - - 9 a.m. to 4 p.m.
TUESDAYS - - - - 9 a.m. to 1 p.m.
Evenings of MONDAY,
WEDNESDAY, and SATURDAY 6 p.m. to 8 p.m.

ADMISSION FREE.



CITY OF PERTH.

PERTHSHIRE NATURAL HISTORY MUSEUM.

REPORT

OF THE

MUSEUM COMMITTEE TO THE TOWN COUNCIL

For the Year ending 15th May, 1913.

PERTH:

PRINTED BY SMART & M'KINLAY, 13-15 KING STREET.

1913.

MUSEUM COMMITTEE.

Lord Provost SCOTT.	Councillor CROMBIE.
Bailie CAMPBELL.	Councillor GRIEVE.
Bailie MILLER.	Councillor HAMILTON.
Treasurer CLARK.	Councillor M'CRACKEN.
Councillor ALLAN.	Councillor M'FARLANE.
Councillor BEATON.	Councillor MACPHERSON.
	Councillor ROLLO.

Ex-Dean of Guild WOTHERSPOON, *Chairman.*

*Advisory Committee from the Perthshire Society of
Natural Science.*

Mr WILLIAM BARCLAY.	Mr JAMES COATES.
Mr A. W. BROWN.	Mr S. T. ELLISON.
Mr G. F. BATES.	Mr JAMES MORISON.

From the Perth County Council.

Mr W. T. J. S. STEUART FOTHRINGHAM.

From the Perth School Board.

Very Rev. Canon LAVELLE.

JOHN BEGG, *Town Clerk.* ALEX. M. RODGER, *Curator.*

W. SCRIMGEOUR, *Janitor.*

PERTHSHIRE NATURAL HISTORY MUSEUM.

REPORT

FOR THE YEAR ENDING 15TH MAY, 1913.

*To the Hon. The Lord Provost, the Magistrates, and
Town Council of Perth.*

GENTLEMEN,

The Committee in charge of the Perthshire Natural History Museum has pleasure in submitting the Thirtieth Annual Report.

The fabric throughout is in good repair.

As indicated in the last Report, the building was wired throughout for electric light. Incandescent lamps (Osram) are used, and a very even distribution of the light has been secured. The arrangement of the main and branch switches permits the lighting of any section of the Museum. The specification was drawn up by Mr Lambert, manager of the Perth Electricity Works. The contract was carried out by Messrs Westwood & Sons, Perth. Credit is due to the firm for the way the work was done, and the neat finish imparted to it ; to Mr Lambert thanks are due for supervising and carrying the work through. The installation included an electric fan in the Lecture Room, and this, with a series of air ducts communicating with the Museum and passages has led to a great improvement in the ventilation of the building.

The Lecture Room was distempered, and all exposed electric casing was painted to match the surrounding walls.

Seventy-nine meetings were held in the buildings ; at a number of these the new ventilating system proved a great boon.

As in former years, a number of live animals were kept in the Lecture Room, chiefly with the view of interesting young folks in the life history of aquatic animals. In this way trout, frogs, and newts eggs were hatched, and the young reared; pond snails, mussels, etc., were also shown. The accommodation is inadequate to do much in this way, the frequent moving of the material at this season (October to May) for the lectures, meetings, etc., making it necessary to use only a few small vessels.

The display of named Wild Flowers in June and July was particularly good. Upwards of 350 species were exhibited and the interest shown in the exhibits was most gratifying. To Mr D. Campbell, and several other members of the Perthshire Society of Natural Science, the Committee's thanks are due for this work.

Applications were received from 118 teachers in and near Perth, for Museum material for nature study. Every facility is given for this work, but more might be done were teachers to consult the Curator, and make their wants known. A number of art students were given special facilities, specimens being removed from their cases and placed in particular light and position, etc. In several departments of natural history, students and specialists were given access to the Reference Collections.

On the occasion of the British Association Meeting, held in Dundee in September last, the Museum was visited by a number of distinguished naturalists, including the late Prof. Adam Sedgwick. Special visits were also paid to the Museum by the Royal Arboricultural Society; the Dundee Naturalists' Society; the Conifer Club; the members of the Botany Class, University College, Dundee; a number of school classes, and others.

The subject of essay set by the Perthshire Society of Natural Science last year was "A Perthshire River." 80 essays were received from children attending schools in the City and County. At the prize distribution, the President, Mr W. Barclay, occupied the chair, and Lord Provost Scott gave the young folks a short address, and afterwards distributed the prizes.

Observations were made daily at 9 a.m. and 9 p.m. on the weather at Perth. Those taken in the morning were available to the public by means of a chart placed in the window alongside of the forecast chart issued by the British Meteorological Office each day. Returns were sent each week to the office of the Registrar General; and a report to the local press; monthly returns to the Scottish Meteorological Society; to Dr Mill, British Rainfall; to the Manager, Waterworks, Perth. An abstract for the year 1912 was supplied to the Medical Officer of Health for the City, and also to the Perthshire Society of Natural Science, and appears at the end of this Report.

The Reports are now compared with a 30 years' average. Mr Watt, of the Scottish Meteorological Society, has been kind enough to supply the Curator with the monthly rainfall returns for Perth prior to 1883, namely, from 1855. We are thus in possession of monthly rainfall returns for nearly 60 years.

Abstracts and reports on the weather of particular periods were supplied to the County Council, the Town Council, and to others requiring the information for special or for technical purposes.

It might be pointed out that no record is kept of the amount of sunshine at Perth, as we do not possess a sunshine recorder. It would be useful as well as interesting to know the amount received at Perth during each period.

Thanks are due to the local Press for their courtesy in publishing occasional notes of donations, exhibits, and observations.

The number of visitors to the Museum for the year was 11,023, making a total of 278,724 since the opening.

THE PERTHSHIRE OR LOCAL MUSEUM.

The specimens added to this collection during the year are indicated by an asterisk (*) in the list of additions on page 8.

The table-cases, Nos. 48 to 52, containing the Mosses and Ferns and their allies, were all remounted, and are now shown in glass-topped boxes. These have been raised in the cases to admit of a close examination of the specimens with a pocket lens. A series of 440 labels were printed for the exhibit.

The Reference Collection of Flies (Diptera) was extended, 3 new drawers being added to admit the recent additions. The 64 specimens from Mr Carter contain 39 species, 2 of which are new to Scotland, namely, *Chilosia maculata*, Fen., and *Platychirus fulviventris*, Mcq., while all the others are more or less rare.

The Collections of Lichens, both in the exhibition and reference series, have had numerous additions (some new to the county) made to them recently, chiefly the work of Mr C. MacIntosh. These collections are also being mounted in glass-topped boxes, and will shortly be available for examination.

The Flowering Plants in the Herbarium are being overhauled, and, where necessary, new fascicles inserted. The boxes have been numbered to correspond with the London Catalogue, so that the position of any plant may be found easily. A copy of the Perthshire Flora has been interleaved, and on this the locality of each specimen is written opposite each species. A complete catalogue of the Herbarium will thus be available, besides showing at a glance the distribution of each species in the County. This useful form of cataloguing has been undertaken by Mr James Coates.

The Mosses have also been treated in like manner by Mr R. H. Meldrum.

A selection from the Willows, examined by the Rev. E. F. Linton, were requested by, and are now in the hands of, Dr Moss, Cambridge.

The Bladderworts (*utricularia*) were examined by Mr A. Bennett, and were afterwards submitted to Dr Glück, Heidelberg. As a result, this difficult group is now satisfactorily named.

The interior of the exhibition cases and all shelving in the local museum were cleaned, and the specimens attended to where necessary.

INDEX OR TYPE MUSEUM.

The table-case, Nos. 87-94, at the north end was reduced in height and increased in width to correspond with that at the south end of the Museum.

The Reference Invertebrate Material in the cabinets under the case, Nos. 39-46, was overhauled ; tubes of uniform length and various diameters used, and plugs of cotton wool employed in place of corks. The tubes are arranged in large screw-topped bottles, and covered with spirits. In this way, there is a saving of space, and evaporation is reduced to a minimum.

A series of Trophies from Somaliland, on loan from Captain D. Ogilvy, R.E., are on view.



ADDITIONS TO THE MUSEUM.

*PERTHSHIRE COLLECTIONS.

MAMMALS—

- Chacma baboon, male—Mr C. Kirk.
- Mounted head of Lion, Kudu, Gerenuk, Aoul, Beisa,
- Horn of Rhinoceros—On loan, Capt. D. Ogilvy, R.E.

BIRDS—

- *Robin, young—Mr A. M. Rodger.
- *Canada Goose, young—Mr G. Hart.
- *Lark, male—Mr A. Gray.
- *Garden Warbler, eggs with dark markings—Mr T. M'Glashan.
- *Great Spotted Woodpecker, nest material—Mr A. Blair.
- *Gold-crested Wren—Miss Handchett.
- *Kingfisher, material for nest—Mr Mulholland.
- *Redshank, female—Mr Atholl Macgregor.
- *Gray Phalcrope—Mr Atholl Macgregor.
- *Pintail, female—Colonel Drummond Hay

FISHES—

- *Pike, young—Master J. Craigie.
- Mud Skippers—Dr J. A. Chubb.

INVERTEBRATES—

- *Swan Mussels—Members of Junior section.
- Mussel, *Unio tumidus*—Mr J. Leslie.
- *Bees, *Andrena clarkella*—Mr A. M. Rodger.
- Wasp, very large nest—Mr H. S. Pullar.
- *Flies (Diptera), 64 specimens, 2 new to Scotland—Mr A. E. J. Carter.
- Dragonfly, *Calopteryx virgo*—Mr Gilbert Walker.
- Stick Insect, Ceylon—Miss L. Smith.
- Beetles, 50 British, mostly *Chrysomelidae*—Mr W. E. Sharp.

Beetles, *Phyllobius maculicornus* and host plants—Mr T. Anderson, M.A., B.Sc.

BOTANY—

Scots Fir, root grown through a perforated flint pebble—Colonel Drummond Hay.

*Rush, *Juncus tenuis*, *Lesser Burnet, *Poterium sanguisorba*, *Small Reed, *Calamagrostis epigeios*, *Gentian, *Gentiana amarella*, *Thistle, *Cnicus oleraceus*, **Chaerophyllum aureum*—Mr Wm. Barclay.

*Pepperwort, *Lepidium campestre*—Mr D. Campbell.

*Bladderwort, *Utricularia neglecta*—Mr A. Bennett.

**Mallows paludosa*—Mr D. M. Haggart.

Barley, hybrid varieties—Mr T. Anderson, M.A., B.Sc.

*Ferns—Beech, Parsley, Hart's-tongue, Scale-fern, Alternate-leaved Spleenwort—Mr W. T. Morrison.

*Forked Spleenwort—Mr James Coates.

**Polypodium alpestre* var.-flexile—Mr D. H. Haggart.

*Parsley-fern—Mrs Rodger.

*Moss, *Tetraphis pellucens*—Mr D. H. Haggart.

*Puff-ball—Master John Drummond.

*Lichen, *Biatorella campestris*—Mr James Menzies.

*Lichens, *Pertusaria communis*, *P. leioplaca*, *Biatorina premnea*, *Arthonia radiata*, (a.) *Arthopyrenia fallax*, (b.) *Porina carpinea*; a. new to County, b. new to Scotland—Mr C. M'Intosh.

*Discomycetes—*Phaeangella prunistri*, *Peziza subrepanda* and *Curreyella trachycarpa*—Mr C. M'Intosh.

Discomycetes, new to Scotland, *Sepultarea foliacea*, *Humaria rubens*, *Tricharia gilva*, *Boudiera areolata*; new to Britain, *Pustularia patavina*, *Dasyphypha perplexa*, *D. flavo-fuliginea*, *Helotium nigripes*, *Anthracobia nitida*; new to science, *Calycella Menziesi*, described in the "Transactions of the British Mycological Society," vol. iv., pt. i—Mr James Menzies,

GEOLOGY—

- *Porphyrite, Quartzite, Granite, Epidiorite, Andesite —
Mr A. M. Rodger.
- *Limestone, Barytes—Mr G. F. Bates, B.A., B.Sc.
- Clay concretions—Mr A. W. Brown.
- *Agate (polished)—Mr H. Walker.
- *Agates—Mr A. Gray.
- *Limestone, Granite, Foliated Granite, Felsite, Mica Schist—Messrs Bates and Rodger.
- *Calcite, variegated vein—Mr Lindsay.
- Coal, Spitsbergen—Dr W. S. Bruce.

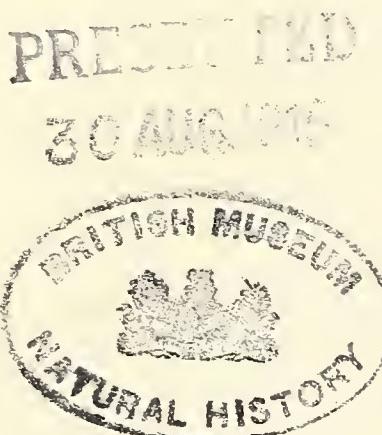
Lantern Slides, or use of Negatives, from Messrs Jas. Winter,
H. Coates, W. Barclay, Major Mercer, and A. M.
Rodger.

ARCHIBALD U. WOTHERSPOON,

Chairman of Committee.

ALEX. M. RODGER,

Curator.



ABSTRACT OF METEOROLOGICAL OBSERVATIONS, PERTH, 1912.

MONTH.	BARO-MET'R.		AIR TEMPERATURE.		HYGROMETER.		RAIN.		WIND DIRECTION.								REMARKS.		
	Mean at Sea Level and 32° Fahr. at 9 a.m. and 9 p.m.		Absolute Maximum and Minimum.		Mean of A and B.		Mean at 9 a.m. and 9 p.m.		Number of Observations at 9 a.m. and 9 p.m.										
	Inches.	o.	o.	o.	o.	o.	o.	o.	N	NE	E	SE	S	SW	W	NW			
JAN.	29.896	41.0	31.4	36.2	-1.0	54	1	15	30	17	35.1	33.6	85	12	-2	2.88	+0.36	Snow, 8, 24; Tay in Spate, 16, 17.	
FEB.	29.572	43.8	32.7	38.3	-0.9	54	29	10	5	12	37.3	35.7	87	16	+3	2.55	+0.40	Ice in Tay, 2, 9; Snow, 6.	
MAR.	29.501	50.2	36.8	43.5	+3.6	69	25	16	8	41.4	39.3	84	21	+7	2.62	+0.25	Thunder and Lightning, 27; Hail, 31.		
APR.	30.104	58.3	37.1	47.7	+3.4	71	24	25	12	11	45.8	42.3	76	5	-7	0.22	-1.60	Driest April for 30 years; Gale on 8.	
MAY	29.929	61.2	41.8	51.5	+2.5	69	10	31	25	2	50.8	46.6	73	9	-4	1.29	-0.86	Dry month.	
JUNE	29.748	62.5	48.5	55.5	+1.0	72	23	36	17	..	54.1	51.4	81	25	+14	3.14	+1.18	Thunder, 13, 26, 28.	
JULY	29.927	68.0	50.6	59.3	+0.1	79	14	42	23	..	57.4	54.1	80	8	-6	1.99	-0.95	Thunder and Lightning, 25, 28; Thunder, 27.	
AUG.	29.664	61.2	46.2	53.7	-3.4	68	16	34	26	..	53.3	50.7	82	19	+3	3.82	+0.33	Thunder and Lightning, 4.	
SEP.	30.157	59.7	42.9	51.3	-1.9	73	16	33	9, 12	3	49.5	46.9	82	7	-6	2.19	-0.04	Thunder, 13, 26, 28.	
OCT.	29.807	53.2	37.6	45.4	-0.8	67	13	28	22	8	43.7	41.7	85	15	0	3.24	+0.28	Rain below average; Gale, 26.	
NOV.	29.836	47.7	35.2	41.5	+0.4	57	15	12	30	10	40.1	37.9	82	10	-5	2.05	-0.76	Snow, 3, 18; Spate, 14, 20 to 25; Flood 14.04 at Perth Bridge on 20; Gales, 2nd and 3rd week.	
DEC.	29.570	45.9	34.1	40.0	+2.0	56	11, 14	16	1, 2, 3	14	40.1	38.1	84	25	+8	4.11	+1.08	Tay in Spate, 25; Rain below average; Gale, 26.	
YEAR	29.809	..	..	46.9	+0.5	79	..	10	..	85	..	..	..	..	..	1.24	-0.33	1.24
Highest	30.594	9 a.m.	23rd April	..	..	..	..	..	..	..	..	..	..	..	..	..	..	42
Lowest	28.308	3 p.m.	26th Nov.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

Averages are for the period 1883-1912--30 years.

Height of Station above Sea Level = 85 feet.

27
green

